

Great Lakes Water Supply Program



DRAFT 4-170 D2 Agricultural Resources Technical Memorandum

January 2018

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EXECUTIVE SUMMARY

TRC Environmental Corporation (TRC) conducted a desktop review of locations of agricultural lands, quantity of agricultural lands, and select types (certified organic) agricultural lands along Route Alternatives M1, M2, and M3 of the Water Supply Pipeline as part of this technical memorandum under the Great Water Alliance (Program). The desktop review was conducted using the Waukesha County Open Data Portal Website (Land Use 2010), the Milwaukee County Land Information Office Geospatial data (Land Use 2010), the U.S. Department of Agriculture Organic Integrity Database, and the Organic Agriculture in Wisconsin 2017 Status Report and 2015 Status Report. Using these resources, agricultural lands were identified and mapped on recent aerial photographs.

To summarize:

- There are no known, certified organic farms along any of the three route alternatives.
- Route Alternative M1 contains 2.17 acres of agricultural lands within the right-of-way, most likely due to farming practices crossing property lines. No agricultural lands are located within the right-of-way or proposed easements of Route Alternative M2 or Route Alternative M3.
- Route Alternative M3 contains the most agricultural land, at 31.95 acres within the buffer. (**Appendix G-2, Figures 4A – 4G**).
- Route Alternative M1 contains the second most agricultural land, at 22.44 acres within the buffer (**Appendix G-2, Figures 2A – 2F**).
- Route Alternative M2 contains the least agricultural land, at 19.77 acres within the buffer (**Appendix G-2, Figures 3A – 3F**).

Based solely from a perspective of agricultural land impact avoidance and only on the amount of agricultural land mapped within the right-of-way, proposed easements, and 50-foot buffers, Route Alternatives M1 and M2 are comparable and more preferable than Route Alternative M3.

SECTION 1 Introduction

1.1 Agricultural Resources Assessment Desktop Review

The agricultural resources assessment as part of the Great Water Alliance (Program) was conducted in December 2017 and January 2018 by TRC Environmental Corporation's (TRC) scientists and GIS mapping specialists. The Study Area included the road right-of-way and proposed easements of Route Alternatives M1, M2, and M3, and a 50-foot buffer extending beyond the edge of the right-of-way on either side (**Appendix G-2, Figures 1-4**). Please note that future technical memoranda and reports may provide additional details on these or other route alternatives as the planning and design of the Program evolves.

1.2 Agency Regulatory Authority and Discussion

Agricultural impacts are one of many key issues for the Public Service Commission of Wisconsin (PSC) in a construction program, and as part of the Certificate of Public Convenience and Necessity (CPCN) process. The Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) has worked closely with the PSC, Wisconsin Department of Natural Resources (WDNR), and Wisconsin utilities to develop an approach that protects the farmland in Wisconsin. The issues of importance to both the design and the construction process that need to be addressed up front (and in a CPCN application) include erosion, compaction, soil mixing, animal and crop diseases (bio-security) and organic farms.

DATCP is, in part, responsible for protecting agricultural resources in Wisconsin. For utility programs, DATCP will review a proposed program for potential siting, access (construction and maintenance) and construction impacts. DATCP staff also prepare an Agricultural Impact Statement (AIS) for public programs that involve the acquisition of farmland by purchase or easement.

To begin addressing the agricultural issues for the Program, it is important to gather information on the locations of croplands, the type of farm operations, and other applicable agricultural practices to consider during the Route Study, route alternative selection and design process. This acknowledges that the agricultural issues are being treated as seriously as other resources for which permits will be obtained. While there are no specific permits for agricultural resources, the end product should be to acknowledge in the CPCN how these issues were addressed in the planning and design process.

SECTION 2 Methodology

Data on agricultural areas were sourced from the Waukesha County Open Data Portal Website (Land Use 2010), the Milwaukee County Land Information Office Geospatial data (Land Use 2010), the Southeast Wisconsin Regional Planning Commission's Land Use Areas (2010), U.S. Department of Agriculture Organic Integrity Database, and the Organic Agriculture in Wisconsin 2017 Status Report and 2015 Status Report. TRC identified locations and measured the size of agricultural fields within each of the three route alternatives. The route alternative corridors are primarily defined as the road right-of-way with an additional 50-foot buffer on either side, and proposed easements within Route Alternative M2 and Route Alternative M3. Each agricultural area was labeled and depicted on **Figures 2A through 4G, Appendix G-2**. The agricultural parcel data was further subdivided into three subcategories: 1) Agricultural areas within the road right-of-way (of which there is very little), 2) Agricultural areas within the 50-foot buffer, and 3) Agricultural areas within the proposed easements (of which there is none). This review was based on available online data. Other useful information regarding Natural Resource Conservation Service (NRCS) Crop Reserve Program land, NRCS Wetland Reserve Program land, non-certified organic farms, and other farm improvements would require agency and/or property owner communication, which are not included in this technical memorandum. An assessment of prime farmland, recognized by NRCS, also is not included in this technical memorandum. Adjustments were made using desktop photointerpretation to areas mapped as agricultural land but not being used as agricultural land. This only occurred in right-of-ways where the GIS data from the various sources slightly overlapped.

SECTION 3 Agricultural Review Results & Discussion

Based on a review of the U.S. Department of Agriculture Organic Integrity Database and the Organic Agriculture in Wisconsin 2017 Status Report and 2015 Status Report, there are no known/reported, certified organic farms along any of the three route alternatives. The nearest known/recorded, certified organic farm (Mason Farms) is located on Denoon Road in the Village of Big Bend. Non-certified organic farms may still be present, but could not be identified without communicating with individual land owners.

The locations of agricultural fields are shown in **Appendix G-2, Figures 2 through Figure 4G**. Details on the amount of agricultural fields along each route alternative are provided in **Table G-3-1**. The following sections provide a summary of the quantity of agricultural fields and number of agricultural parcels for each route alternative.

Table G-3-1 Agricultural Evaluation Summary

Route Alternative	Route Alternative Length (miles)	Total Agricultural Area (Acres)
Common Route - Right-of-Way	2.09	0.00
Common Route - Buffer	2.09	3.39
Route Alternative M1 - Right-of-way	10.66	2.17
Route Alternative M1 - Buffer	10.66	22.44
Route Alternative M2 - Right-of-way	10.50	0.00
Route Alternative M2 - Buffer	10.50	19.77
Route Alternative M3 - Right-of-way	11.50	0.00
Route Alternative M3 - Buffer	11.50	31.95

3.1 Common Route

The Common Route is an approximately 2.09-mile segment in which all three route alternatives share the same route. The Common Route is located between the Water Supply Pipeline's connection to the Waukesha Water Utility's (WWU's) distribution system at Route 59 and Sunset Avenue and the location of the proposed Booster Pumping Station (BPS). The Common Route contains no agricultural land within the right-of-way. The Common Route contains 3.39 acres of agricultural land within the 50-foot buffer (**Appendix G-2**). The agricultural land within the 50-foot buffer on either side of the corridor is contained within 12 mapped parcels. Additional information on each agricultural parcel along the Common Route is provided in **Appendix G-1**.

3.2 Route Alternative M1

Route Alternative M1 contains 2.17 acres of agricultural land within the right-of-way contained within seven mapped parcels. Based on aerial photographs, it appears that this is due to farming practices extending into the right-of-way. Route Alternative M1 contains 22.44 acres of agricultural land within the 50-foot buffer (**Appendix G-2, Figure 2 and Figures 2A – 2F**). The agricultural land within the 50-foot buffer on either side of the corridor is contained within 46 mapped parcels. Additional information on each agricultural parcel along Route Alternative M1 is provided in **Appendix G-1, Table 1**.

3.3 Route Alternative M2

Route Alternative M2 contains no agricultural land within the roadway right-of-way or proposed easements. The Route Alternative M2 50-foot buffer contains 19.77 acres of agricultural land (**Appendix G-2, Figure 3 and Figures 3A – 3F**). The agricultural land within the buffer is contained within 62 mapped parcels. Additional information on each agricultural parcel along Route Alternative M2 is provided in **Appendix G-1, Table 2**.

3.4 Route Alternative M3

Route Alternative M3 contains no agricultural land within the roadway right-of-way or proposed easements. Route Alternative M3 contains 31.95 acres of agricultural land within the 50-foot buffer (**Appendix G-2, Figure 4 and Figures 4A – 4G**). The agricultural land within the 50-foot buffer on either side of the corridor is contained within 84 mapped parcels. Additional information on each agricultural parcel along Route Alternative M3 is provided in **Appendix G-1, Table 3**.

3.5 Agricultural Review Discussion

As stated above, Route Alternative M1 contains 2.17 acres of agricultural land within the right-of-way. Based on aerial photographs, it appears that this is likely due to farming practices extending into the right-of-way. Within the right-of-way, the farming practices are essentially field edges, or where farming equipment typically makes turns.

Of the three route alternatives, Route Alternative M3 contains the most agricultural land, at a total of 31.95 acres in the 50-foot buffer. Route Alternative M1 contains the second most agricultural land, at 22.44 total acres. Route Alternative M2 contains the least, at 19.77 total acres.

Based solely from a perspective of agricultural land impact avoidance and only on the amount of agricultural land mapped within the right-of-ways, proposed easements, and 50-foot buffers, Route Alternatives M1 and M2 are comparable and more preferable than Route Alternative M3.

The results of this research will aid in determining the amount and type of agricultural fields that are located within each route alternative corridor. Based on this information, some assumptions may be made to determine which route alternative could potentially result in the least amount of impacts to agricultural land. In general, based on desktop analysis, the route alternative with the least amount of agricultural land will likely result in the least amount of impact to agricultural land. It is important to note that this review was limited to quantity of agricultural land and readily available public information. Other factors could alter the results. These factors include presence and abundance of undocumented organic farms, NRCS Crop Reserve Program land, NRCS Wetland Reserve Program land, or other farm uses and improvements made by the individual land owners.

The findings included in this technical memorandum are limited to available online data and the location of route alternatives supplied to TRC at the time this assessment was conducted. Adjustments to route alternative alignments or creation of new route alternatives will likely result in changes to the quantity, extents, and types of agricultural lands reported herein. Due to the inherent limitations of available online resources and databases, on-site field investigations, information from various state and federal agencies (e.g. DATCP, NRCS, Farm Service Agency), and information from landowners will result in additional information needed to determine the potential impacts on not only quantity but types, easements, and uses of agricultural lands.



Appendix G-1 - Tables



Table 1 Agricultural Parcel Information: Route Alternative M1

Agriculture Tag # (From Figures G-2 2A – 2F)	Buffer or Right-of-Way	Parcel Address	Agriculture (Ag) Description (if available)	Acreage
A-1	Buffer (Common Route)		Pasture & Other Ag	0.264
A-2	Buffer (Common Route)		Pasture & Other Ag	0.128
A-3	Buffer (Common Route)		Pasture & Other Ag	0.993
A-4	Buffer (Common Route)		Pasture & Other Ag	0.285
A-5	Buffer (Common Route)		Pasture & Other Ag	0.102
A-6	Buffer (Common Route)		Pasture & Other Ag	0.387
A-7	Buffer (Common Route)		Pasture & Other Ag	0.172
A-8	Buffer (Common Route)		Pasture & Other Ag	0.023
A-9	Buffer (Common Route)		Pasture & Other Ag	0.007
A-10	Buffer (Common Route)		Pasture & Other Ag	0.150
A-11	Buffer (Common Route)		Pasture & Other Ag	0.498
A-12	Buffer (Common Route)		Pasture & Other Ag	0.247
A-12	Buffer		Pasture & Other Ag	0.371
A-13	Buffer		Pasture & Other Ag	1.074
A-14	Buffer		Pasture & Other Ag	1.287
A-15	Buffer		Pasture & Other Ag	1.477
A-16	Buffer		Pasture & Other Ag	0.152
A-17	Buffer		Pasture & Other Ag	0.499
A-18	Buffer		Pasture & Other Ag	0.178
A-19	Buffer		Pasture & Other Ag	0.246
A-20	Buffer		Pasture & Other Ag	0.360
A-20	Right-of-Way		Pasture & Other Ag	0.123
A-21	Buffer		Pasture & Other Ag	0.850
A-22	Buffer		Pasture & Other Ag	0.016
A-23	Buffer		Pasture & Other Ag	0.217
A-24	Buffer		Pasture & Other Ag	0.068
A-25	Buffer		Pasture & Other Ag	0.352
A-26	Buffer		Pasture & Other Ag	0.312
A-27	Buffer		Pasture & Other Ag	0.417
A-28	Buffer		Pasture & Other Ag	0.553
A-28	Right-of-Way		Pasture & Other Ag	0.196
A-29	Buffer		Pasture & Other Ag	0.207
A-30	Buffer		Pasture & Other Ag	0.282
A-31	Buffer		Pasture & Other Ag	0.349
A-32	Buffer		Pasture & Other Ag	0.371
A-33	Buffer		Pasture & Other Ag	1.451
A-33	Right-of-Way		Pasture & Other Ag	0.480

Table 1 Agricultural Parcel Information: Route Alternative M1

Agriculture Tag # (From Figures G-2 2A – 2F)	Buffer or Right-of-Way	Parcel Address	Agriculture (Ag) Description (if available)	Acreage
A-34	Buffer		Orchards and Nursery	0.400
A-35	Buffer		Pasture & Other Ag	0.793
A-35	Right-of-Way		Pasture & Other Ag	0.262
A-36	Buffer		Pasture & Other Ag	1.470
A-36	Right-of-Way		Pasture & Other Ag	0.490
A-37	Buffer		Cropland	1.220
A-37	Right-of-Way		Cropland	0.434
A-38	Buffer		Pasture & Other Ag	0.085
A-39	Buffer		Pasture & Other Ag	0.763
A-40	Buffer		Pasture & Other Ag	0.001
A-41	Buffer		Pasture & Other Ag	0.668
A-42	Buffer		Pasture & Other Ag	0.385
A-43	Buffer		Pasture & Other Ag	2.295
A-44	Buffer		Pasture & Other Ag	0.022
A-45	Buffer		Pasture & Other Ag	0.688
A-46	Buffer		Pasture & Other Ag	0.118
A-47	Buffer		Pasture & Other Ag	0.016
A-48	Buffer		Pasture & Other Ag	0.082
A-49	Buffer		Pasture & Other Ag	0.201
A-50	Buffer		Pasture & Other Ag	0.559
A-50	Right-of-Way		Pasture & Other Ag	0.179
A-51	Buffer		Pasture & Other Ag	0.487
A-52	Buffer		Pasture & Other Ag	0.232
A-53	Buffer		Pasture & Other Ag	0.037
A-54	Buffer		Pasture & Other Ag	0.217
A-55	Buffer		Pasture & Other Ag	0.149
A-56	Buffer		Pasture & Other Ag	0.237
A-57	Buffer		Pasture & Other Ag	0.014

Table 2 Agricultural Parcel Information: Route Alternative M2

Agriculture Tag # (From Figures G-2 3A – 3F)	Buffer or Right-of-Way	Parcel Address (if available)	Ag Description	Acreage
A-1	Buffer (Common Route)		Pasture & Other Ag	0.264
A-2	Buffer (Common Route)		Pasture & Other Ag	0.128
A-3	Buffer (Common Route)		Pasture & Other Ag	0.993
A-4	Buffer (Common Route)		Pasture & Other Ag	0.285

Table 2 Agricultural Parcel Information: Route Alternative M2

Agriculture Tag # (From Figures G-2 3A – 3F)	Buffer or Right-of-Way	Parcel Address (if available)	Ag Description	Acreage
A-5	Buffer (Common Route)		Pasture & Other Ag	0.102
A-6	Buffer (Common Route)		Pasture & Other Ag	0.387
A-7	Buffer (Common Route)		Pasture & Other Ag	0.172
A-8	Buffer (Common Route)		Pasture & Other Ag	0.023
A-9	Buffer (Common Route)		Pasture & Other Ag	0.007
A-10	Buffer (Common Route)		Pasture & Other Ag	0.150
A-11	Buffer (Common Route)	1	Pasture & Other Ag	0.498
A-12	Buffer (Common Route)	1	Pasture & Other Ag	0.247
A-12	Buffer	1	Pasture & Other Ag	0.371
A-13	Buffer		Pasture & Other Ag	0.752
A-56	Buffer		Pasture & Other Ag	0.237
A-57	Buffer		Pasture & Other Ag	2.298
A-58	Buffer		Pasture & Other Ag	0.014
A-59	Buffer		Pasture & Other Ag	0.300
A-60	Buffer		Pasture & Other Ag	0.105
A-61	Buffer		Pasture & Other Ag	0.626
A-62	Buffer		Pasture & Other Ag	0.328
A-63	Buffer		Pasture & Other Ag	0.104
A-64	Buffer		Pasture & Other Ag	0.558
A-65	Buffer		Pasture & Other Ag	0.573
A-66	Buffer		Pasture & Other Ag	0.226
A-67	Buffer		Pasture & Other Ag	0.462
A-68	Buffer		Pasture & Other Ag	0.251
A-69	Buffer		Pasture & Other Ag	0.814
A-70	Buffer		Pasture & Other Ag	0.085
A-71	Buffer		Pasture & Other Ag	0.735
A-72	Buffer		Pasture & Other Ag	0.274
A-73	Buffer		Pasture & Other Ag	0.288
A-74	Buffer		Pasture & Other Ag	0.180
A-75	Buffer		Pasture & Other Ag	0.299
A-76	Buffer		Pasture & Other Ag	0.230
A-77	Buffer		Pasture & Other Ag	0.213
A-78	Buffer		Pasture & Other Ag	0.197

Table 2 Agricultural Parcel Information: Route Alternative M2

Agriculture Tag # (From Figures G-2 3A – 3F)	Buffer or Right-of-Way	Parcel Address (if available)	Ag Description	Acreage
A-79	Buffer		Pasture & Other Ag	0.462
A-80	Buffer		Pasture & Other Ag	0.754
A-81	Buffer		Pasture & Other Ag	0.231
A-82	Buffer		Pasture & Other Ag	0.231
A-83	Buffer		Pasture & Other Ag	0.231
A-84	Buffer		Pasture & Other Ag	0.162
A-85	Buffer		Pasture & Other Ag	0.232
A-86	Buffer		Pasture & Other Ag	0.604
A-87	Buffer		Pasture & Other Ag	0.307
A-88	Buffer		Pasture & Other Ag	0.241
A-89	Buffer		Pasture & Other Ag	0.125
A-90	Buffer		Pasture & Other Ag	0.561
A-91	Buffer		Pasture & Other Ag	0.334
A-92	Buffer		Pasture & Other Ag	0.241
A-93	Buffer		Pasture & Other Ag	0.445
A-94	Buffer		Pasture & Other Ag	0.136
A-95	Buffer		Pasture & Other Ag	0.108
A-96	Buffer		Pasture & Other Ag	0.262
A-97	Buffer		Pasture & Other Ag	0.448
A-98	Buffer		Pasture & Other Ag	0.118
A-99	Buffer		Pasture & Other Ag	0.206
A-100	Buffer		Pasture & Other Ag	0.355
A-101	Buffer		Pasture & Other Ag	0.210
A-102	Buffer		Pasture & Other Ag	0.104
A-103	Buffer		Pasture & Other Ag	0.063
A-104	Buffer		Pasture & Other Ag	0.203
A-105	Buffer		Pasture & Other Ag	0.148
A-106	Buffer		Pasture & Other Ag	0.078
A-107	Buffer		Pasture & Other Ag	0.179
A-108	Buffer		Pasture & Other Ag	0.305
A-109	Buffer		Pasture & Other Ag	0.212
A-110	Buffer		Pasture & Other Ag	0.110
A-111	Buffer		Pasture & Other Ag	0.172
A-112	Buffer		Pasture & Other Ag	0.488

Table 2 Agricultural Parcel Information: Route Alternative M2

Agriculture Tag # (From Figures G-2 3A – 3F)	Buffer or Right-of-Way	Parcel Address (if available)	Ag Description	Acreage
A-113	Buffer	Not available	Pasture & Other Ag	0.199
A-114	Buffer	Not available	Pasture & Other Ag	0.072
A-115	Buffer	Not available	Pasture & Other Ag	0.006

Table 3 Agricultural Parcel Information: Route Alternative M3

Agriculture Tag # (From Figures G-2 4A – 4G)	Buffer or Right-of-Way	Parcel Address	Ag Description	Acreage
A-1	Buffer (Common Route)		Pasture & Other Ag	0.264
A-2	Buffer (Common Route)		Pasture & Other Ag	0.128
A-3	Buffer (Common Route)		Pasture & Other Ag	0.993
A-4	Buffer (Common Route)		Pasture & Other Ag	0.285
A-5	Buffer (Common Route)		Pasture & Other Ag	0.102
A-6	Buffer (Common Route)		Pasture & Other Ag	0.387
A-7	Buffer (Common Route)		Pasture & Other Ag	0.172
A-8	Buffer (Common Route)		Pasture & Other Ag	0.023
A-9	Buffer (Common Route)		Pasture & Other Ag	0.007
A-10	Buffer (Common Route)		Pasture & Other Ag	0.150
A-11	Buffer (Common Route)		Pasture & Other Ag	0.498
A-12	Buffer (Common Route)		Pasture & Other Ag	0.247
A-12	Buffer		Pasture & Other Ag	0.371
A-13	Buffer		Pasture & Other Ag	0.752
A-56	Buffer		Pasture & Other Ag	0.237
A-57	Buffer		Pasture & Other Ag	2.299
A-58	Buffer		Pasture & Other Ag	0.015
A-59	Buffer		Pasture & Other Ag	0.300
A-60	Buffer		Pasture & Other Ag	0.105
A-61	Buffer		Pasture & Other Ag	0.626
A-62	Buffer		Pasture & Other Ag	0.328
A-63	Buffer		Pasture & Other Ag	0.104
A-64	Buffer		Pasture & Other Ag	0.558
A-65	Buffer		Pasture & Other Ag	0.573
A-66	Buffer		Pasture & Other Ag	0.226
A-67	Buffer		Pasture & Other Ag	0.462
A-103	Buffer		Pasture & Other Ag	0.063
A-104	Buffer		Pasture & Other Ag	0.203
A-105	Buffer		Pasture & Other Ag	0.148
A-106	Buffer		Pasture & Other Ag	0.078
A-107	Buffer		Pasture & Other Ag	0.179

Table 3 Agricultural Parcel Information: Route Alternative M3

Agriculture Tag # (From Figures G-2 4A – 4G)	Buffer or Right-of-Way	Parcel Address	Ag Description	Acreage
A-108	Buffer		Pasture & Other Ag	0.305
A-109	Buffer		Pasture & Other Ag	0.212
A-110	Buffer		Pasture & Other Ag	0.110
A-111	Buffer		Pasture & Other Ag	0.172
A-112	Buffer		Pasture & Other Ag	0.488
A-113	Buffer		Pasture & Other Ag	0.199
A-114	Buffer		Pasture & Other Ag	0.072
A-115	Buffer		Pasture & Other Ag	0.006
A-116	Buffer		Pasture & Other Ag	0.127
A-117	Buffer		Pasture & Other Ag	1.562
A-118	Buffer		Pasture & Other Ag	0.883
A-119	Buffer		Pasture & Other Ag	0.378
A-120	Buffer		Pasture & Other Ag	0.497
A-121	Buffer		Pasture & Other Ag	0.205
A-122	Buffer		Pasture & Other Ag	0.346
A-123	Buffer		Pasture & Other Ag	0.426
A-124	Buffer		Pasture & Other Ag	0.583
A-125	Buffer		Pasture & Other Ag	0.229
A-126	Buffer		Pasture & Other Ag	0.372
A-127	Buffer		Pasture & Other Ag	0.308
A-128	Buffer		Pasture & Other Ag	0.267
A-129	Buffer		Pasture & Other Ag	0.691
A-130	Buffer		Pasture & Other Ag	0.216
A-131	Buffer		Pasture & Other Ag	0.794
A-132	Buffer		Pasture & Other Ag	0.044
A-133	Buffer		Pasture & Other Ag	0.023
A-134	Buffer		Pasture & Other Ag	0.507
A-135	Buffer		Pasture & Other Ag	0.213
A-136	Buffer		Pasture & Other Ag	0.198
A-137	Buffer		Pasture & Other Ag	0.784
A-138	Buffer		Pasture & Other Ag	0.165
A-139	Buffer		Pasture & Other Ag	0.639
A-140	Buffer		Pasture & Other Ag	0.234
A-141	Buffer		Pasture & Other Ag	0.311
A-142	Buffer		Pasture & Other Ag	1.252
A-143	Buffer		Pasture & Other Ag	0.822
A-144	Buffer		Pasture & Other Ag	0.008
A-145	Buffer		Pasture & Other Ag	0.701
A-146	Buffer		Pasture & Other Ag	0.547
A-147	Buffer		Pasture & Other Ag	0.355
A-148	Buffer		Pasture & Other Ag	0.194

Table 3 Agricultural Parcel Information: Route Alternative M3

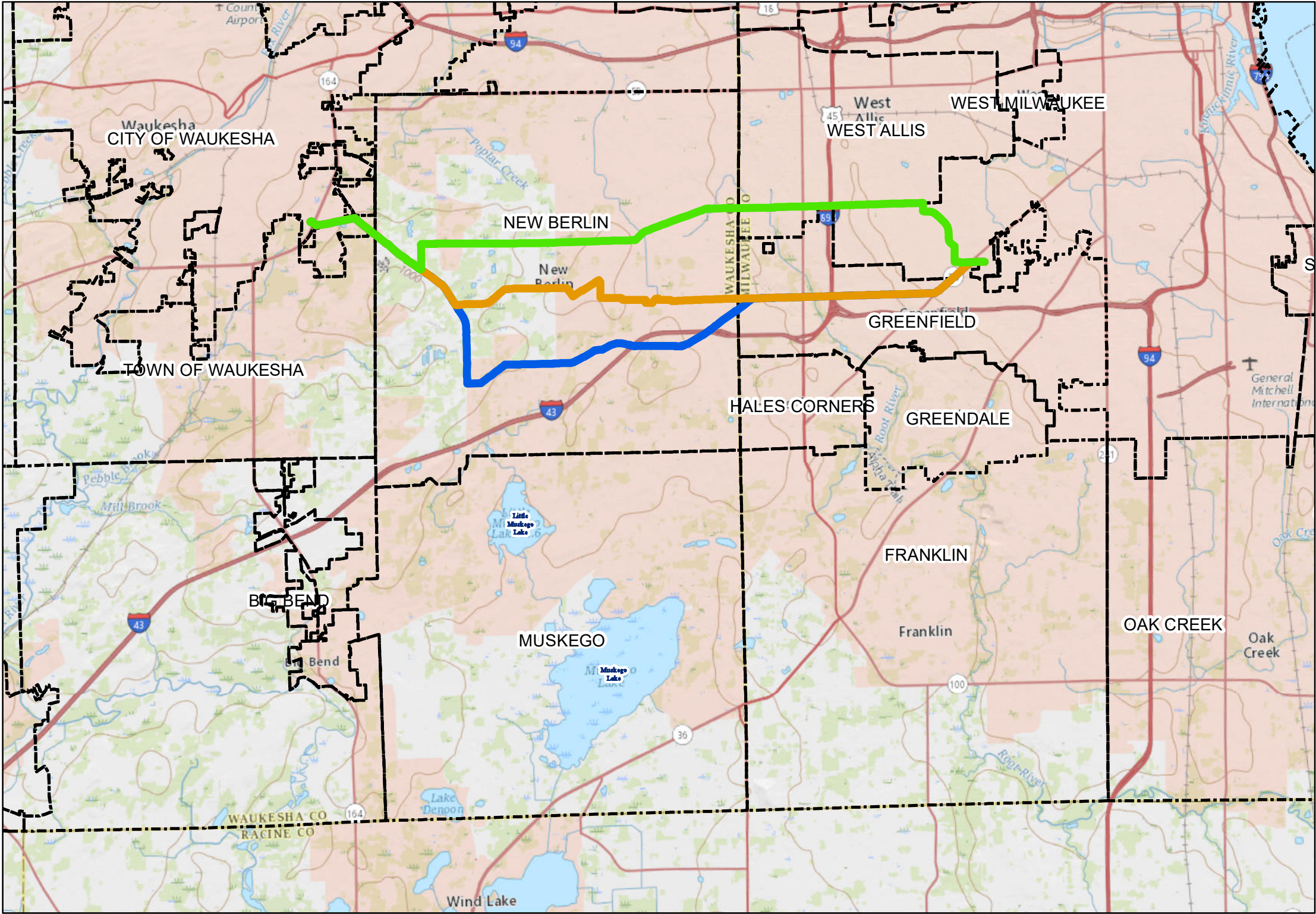
Agriculture Tag # (From Figures G-2 4A – 4G)	Buffer or Right-of-Way	Parcel Address	Ag Description	Acreage
A-149	Buffer		Pasture & Other Ag	0.168
A-150	Buffer		Pasture & Other Ag	0.733
A-151	Buffer		Pasture & Other Ag	0.712
A-152	Buffer		Pasture & Other Ag	0.240
A-153	Buffer		Pasture & Other Ag	0.339
A-154	Buffer		Pasture & Other Ag	0.209
A-155	Buffer		Pasture & Other Ag	0.410
A-156	Buffer		Pasture & Other Ag	0.765
A-157	Buffer		Pasture & Other Ag	0.500
A-158	Buffer		Pasture & Other Ag	0.270
A-159	Buffer		Pasture & Other Ag	0.115
A-160	Buffer		Pasture & Other Ag	0.241
A-161	Buffer		Pasture & Other Ag	0.153
A-162	Buffer		Pasture & Other Ag	0.239
A-163	Buffer		Pasture & Other Ag	0.813
A-164	Buffer		Pasture & Other Ag	0.115
A-165	Buffer		Pasture & Other Ag	0.115
A-166	Buffer		Pasture & Other Ag	0.308
A-167	Buffer		Pasture & Other Ag	0.115
A-168	Buffer		Pasture & Other Ag	0.361
A-169	Buffer		Pasture & Other Ag	0.286
A-170	Buffer		Pasture & Other Ag	0.148
A-171	Buffer		Pasture & Other Ag	0.110
A-172	Buffer		Pasture & Other Ag	0.096



Appendix G-2 - Figures



FIGURE NO. 1



- Legend
- ROUTE ALTERNATIVE M1
 - ROUTE ALTERNATIVE M2
 - ROUTE ALTERNATIVE M3
 - MUNICIPALITIES

- Notes
- BASEMAP IMAGERY FROM ESRI, USGS TOPO.

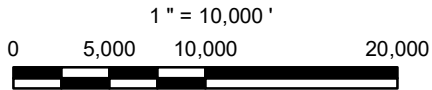
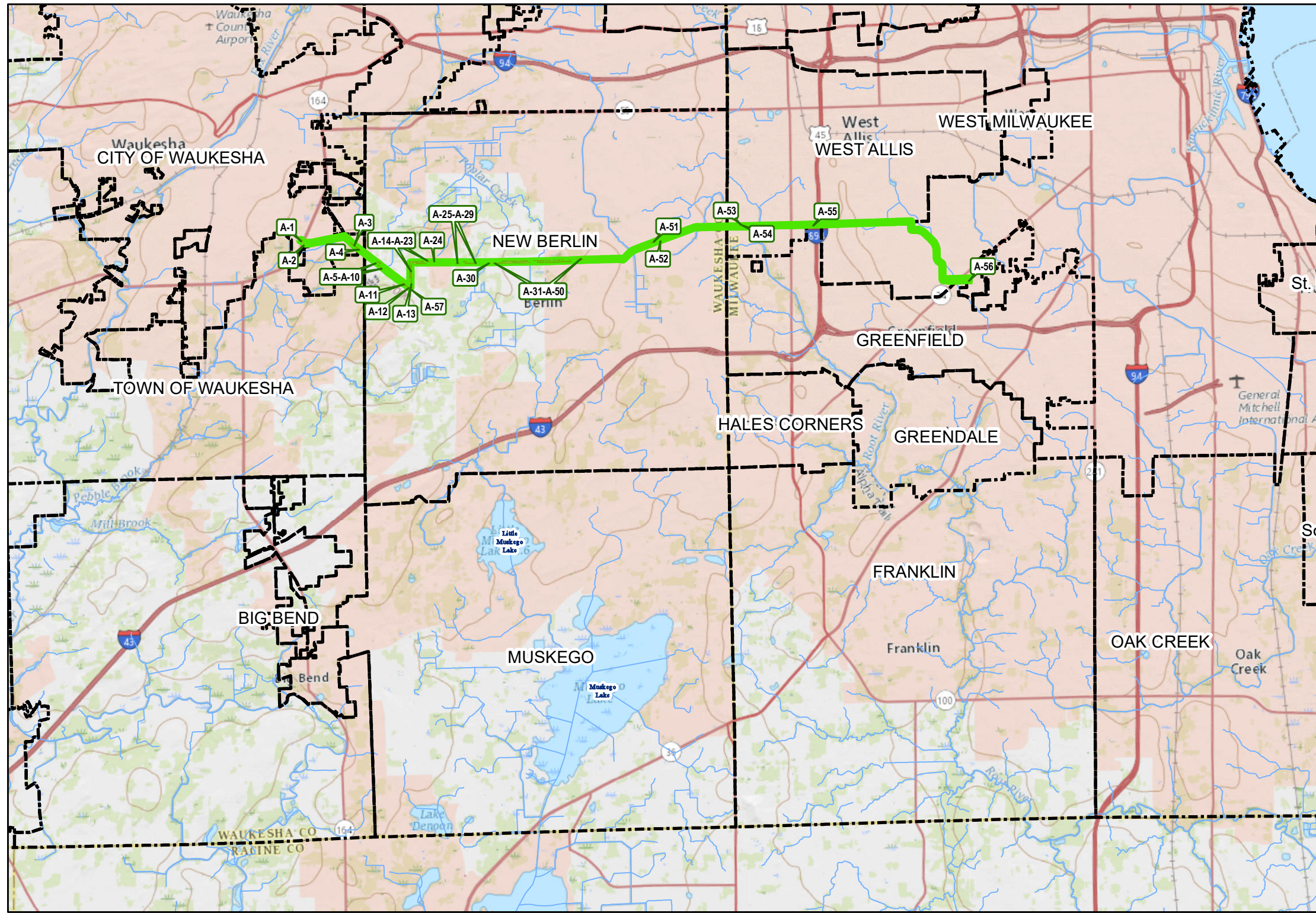
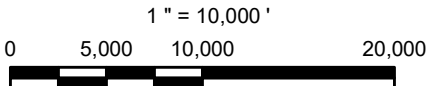


FIGURE NO. 2



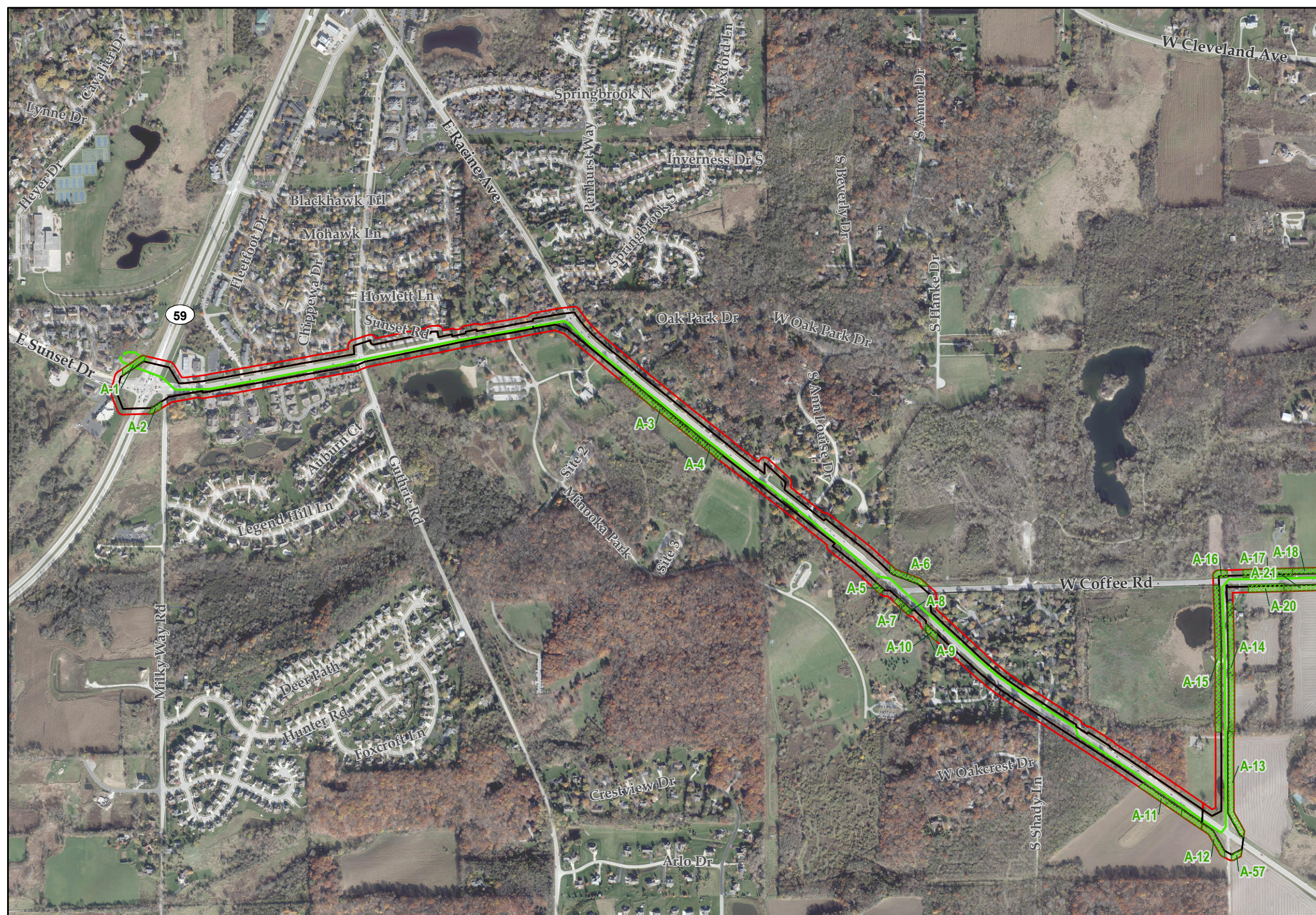
- Legend
- M1 AGRICULTURE AREAS
 - AGRICULTURE AREAS TAG NO.
 - ROUTE ALTERNATIVE M1
 - NHD STREAM/RIVER
 - MUNICIPALITIES

- Notes
- BASEMAP IMAGERY FROM ESRI, USGS TOPO.
 - AGRICULTURE AREAS FROM SEWRPC, LAND USE AREAS 2010.



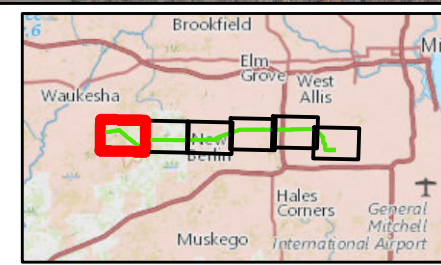
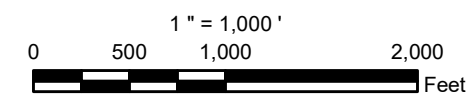
Plotted: 2/2/2018
Document Path: E:\WetlandsGeneral\WaukeshaPipeline\2016_263344\263344-GHv2-OverviewAG_M1.mxd

FIGURE NO. 2A



- Legend
- M1 AGRICULTURE AREAS
 - RIGHT-OF-WAY
 - 50' BUFFER
 - ROUTE ALTERNATIVE M1

- Notes
- BASEMAP IMAGERY PROVIDED BY GREELEY & HANSEN, FALL 2017.
 - AGRICUTLURE AREAS FROM SEWRPC, LAND USE 2010.



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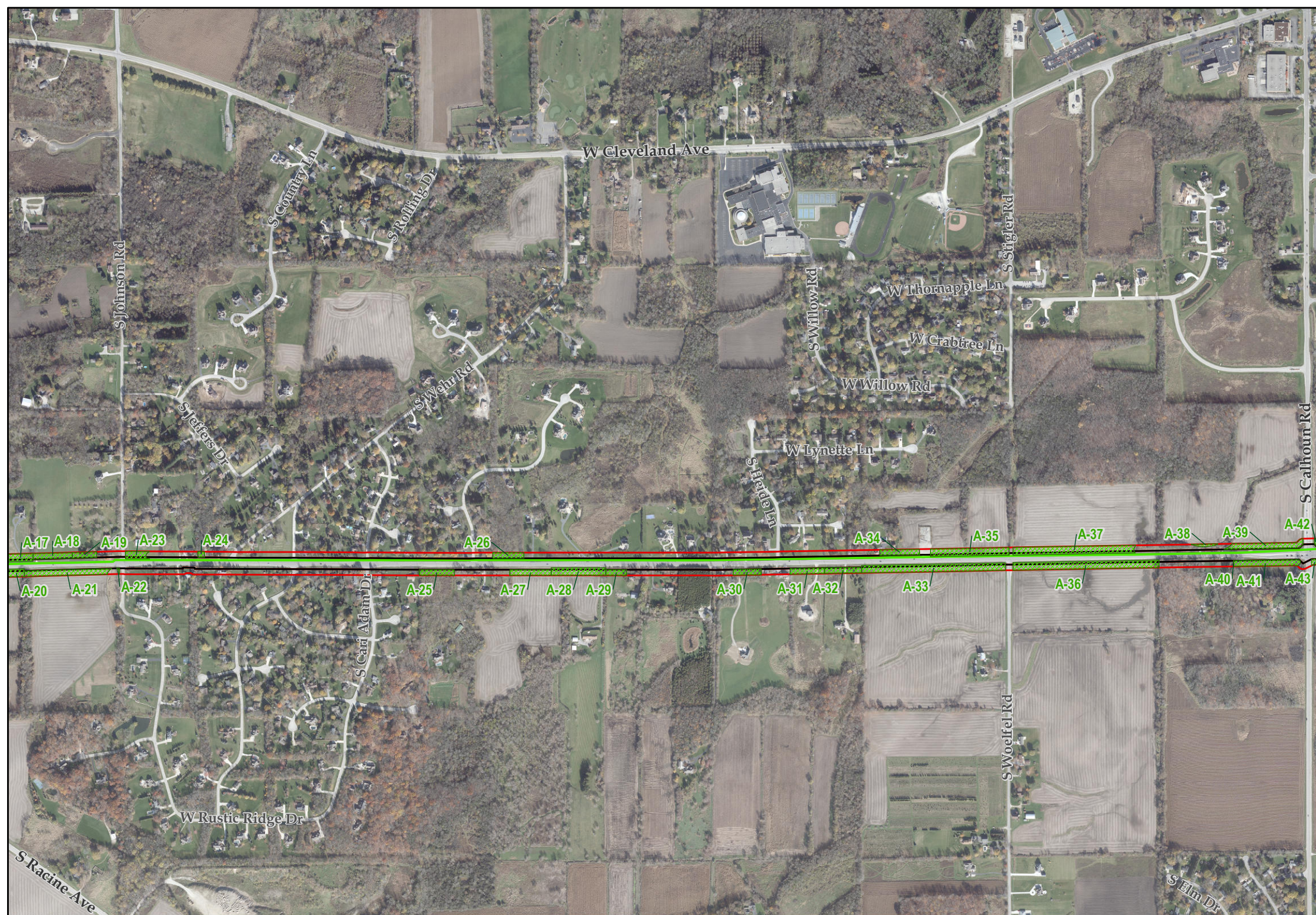
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Great Lakes Water Supply Program
ROUTE ALTERNATIVE M1
DESKTOP AGRICULTURE LAND INVESTIGATION
Date: 2/2/2018

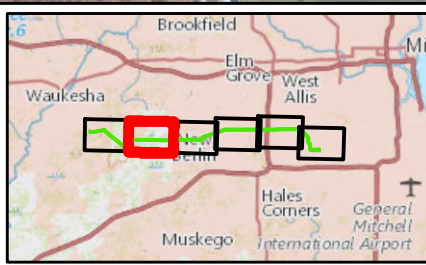
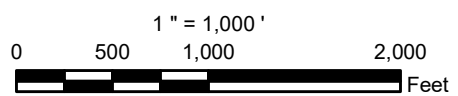
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Document Path: E:\WetlandsGeneral\Waukesha\Pipeline\2016_263344\263344-GHV2-M1Agmb.mxd

FIGURE NO. 2B



- Legend
- M1 AGRICULTURE AREAS
 - RIGHT-OF-WAY
 - 50' BUFFER
 - ROUTE ALTERNATIVE M1

- Notes
- BASEMAP IMAGERY PROVIDED BY GREELEY & HANSEN, FALL 2017.
 - AGRICUTLURE AREAS FROM SEWRPC, LAND USE 2010.




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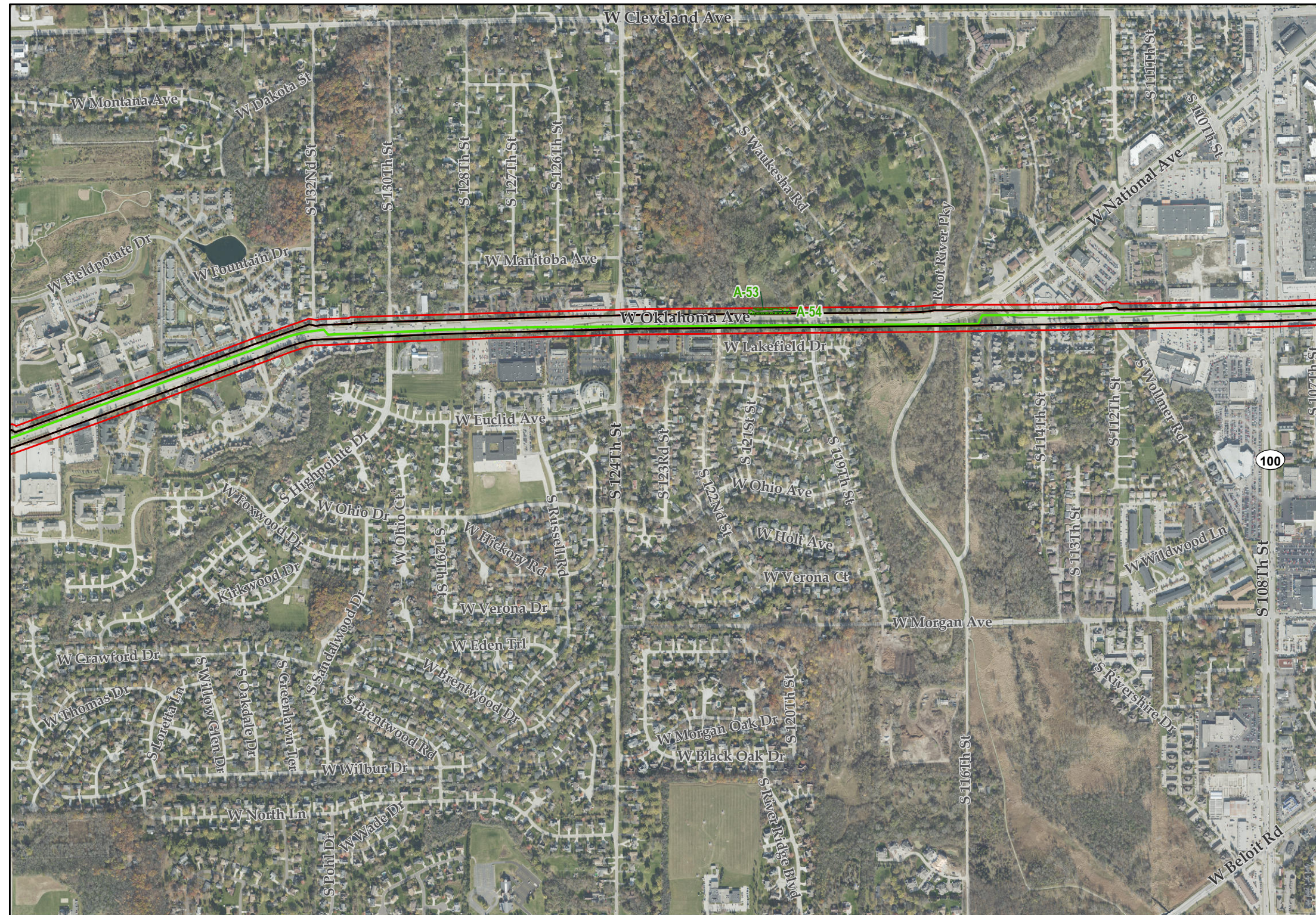
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Waukesha, Wisconsin 53186







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ROUTE ALTERNATIVE M1
DESKTOP AGRICULTURE LAND INVESTIGATION
Date: 2/2/2018

FIGURE NO. 2D



Legend

-
-  M1 AGRICULTURE AREAS
 RIGHT-OF-WAY
 50' BUFFER
 ROUTE ALTERNATIVE M1

Notes

1. BASEMAP IMAGERY PROVIDED BY GREELEY & HANSEN, FALL 2017.
2. AGRICUTLURE AREAS FROM SEWRPC, LAND USE 2010.

1" = 1,000'

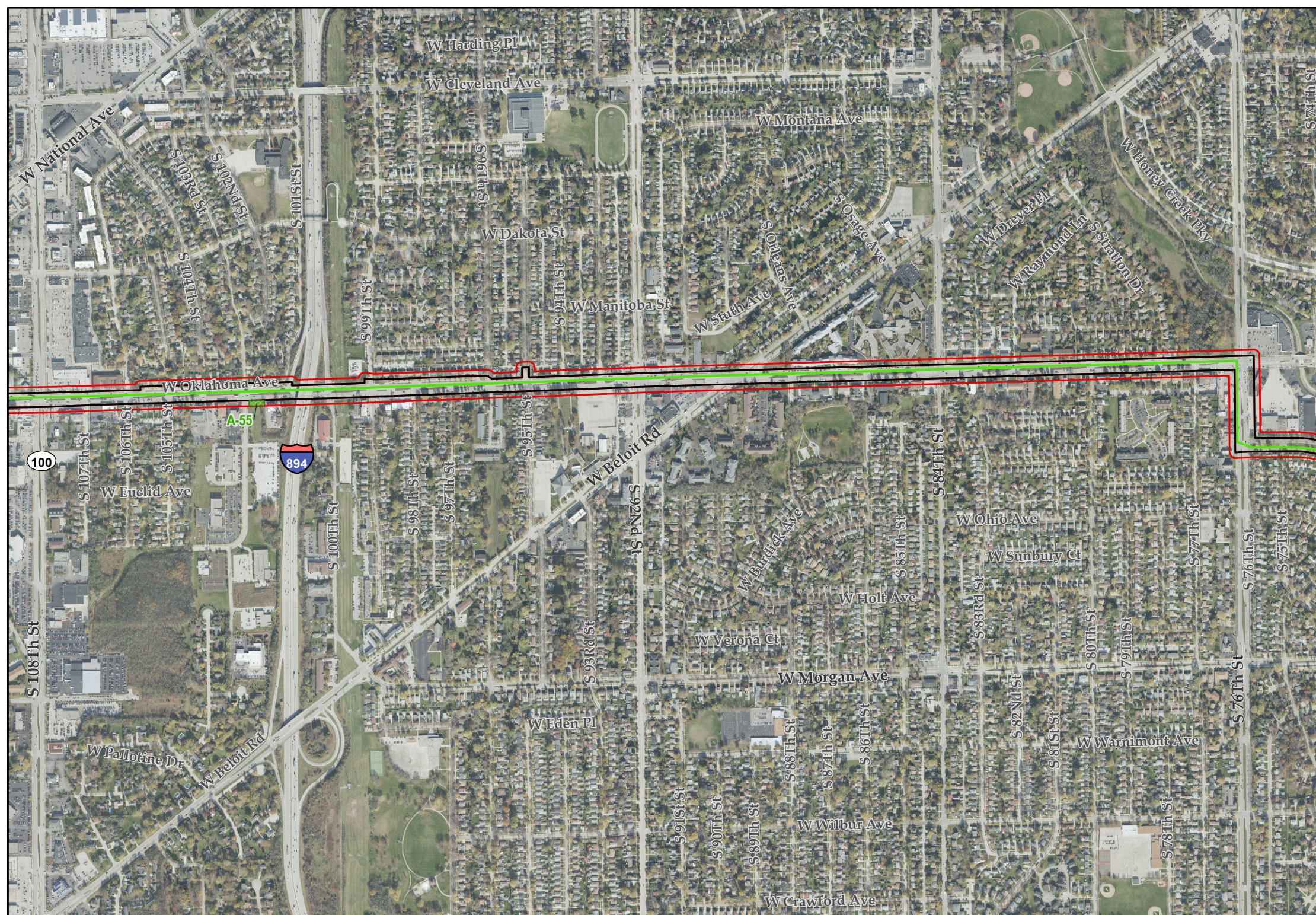
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


Feet



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Great Lakes Water Supply Program
ROUTE ALTERNATIVE M1
CULTURE LAND INVESTIGATION
Date: 2/2/2018

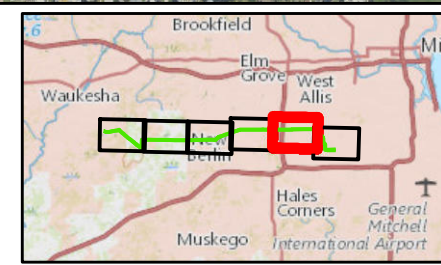
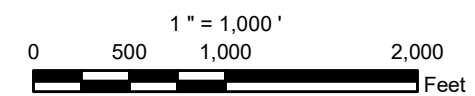
FIGURE NO. 2E



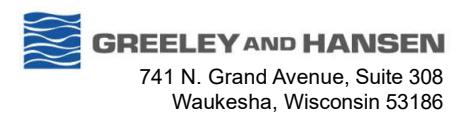
- Legend**
-  M1 AGRICULTURE AREAS
 -  RIGHT-OF-WAY
 -  50' BUFFER
 -  ROUTE ALTERNATIVE M1



- Notes**
1. BASEMAP IMAGERY PROVIDED BY GREELEY & HANSEN, FALL 2017.
 2. AGRICUTLURE AREAS FROM SEWRPC, LAND USE 2010.

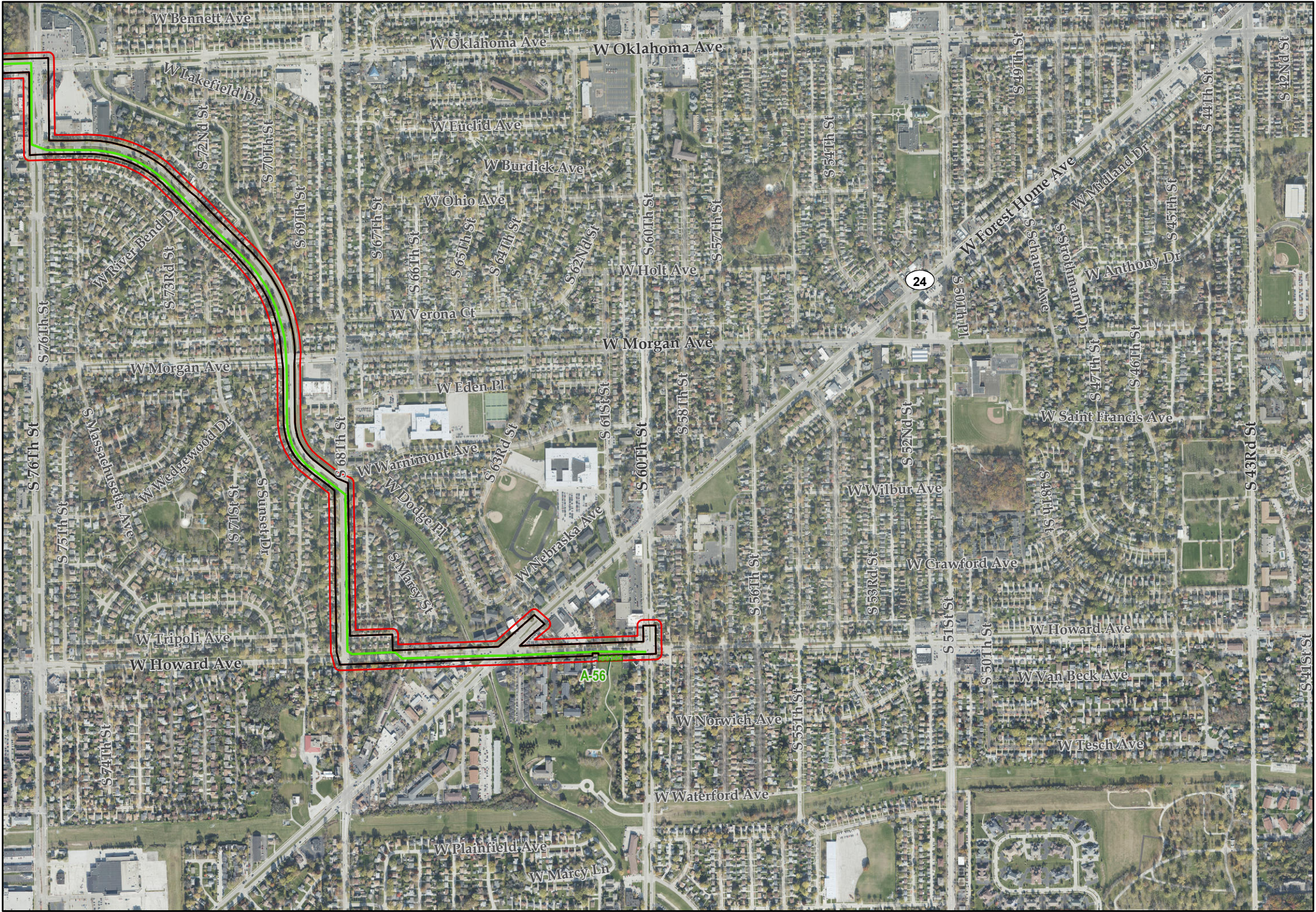


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Document Path: E:\WetlandsGeneral\WaukeshaPipeline\2016_263344\263344-GHv2-M1Agmb.mxd



Waukesha, Wisconsin
Great Lakes Water Supply Program
ROUTE ALTERNATIVE M1
DESKTOP AGRICULTURE LAND INVESTIGATION
Date: 2/2/2018

FIGURE NO. 2F



Legend

- M1 AGRICULTURE AREAS
- RIGHT-OF-WAY
- 50' BUFFER
- ROUTE ALTERNATIVE M1

Notes

- BASEMAP IMAGERY PROVIDED BY GREELEY & HANSEN, FALL 2017.
- AGRICUTLURE AREAS FROM SEWRPC, LAND USE 2010.

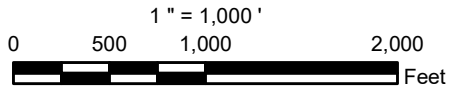
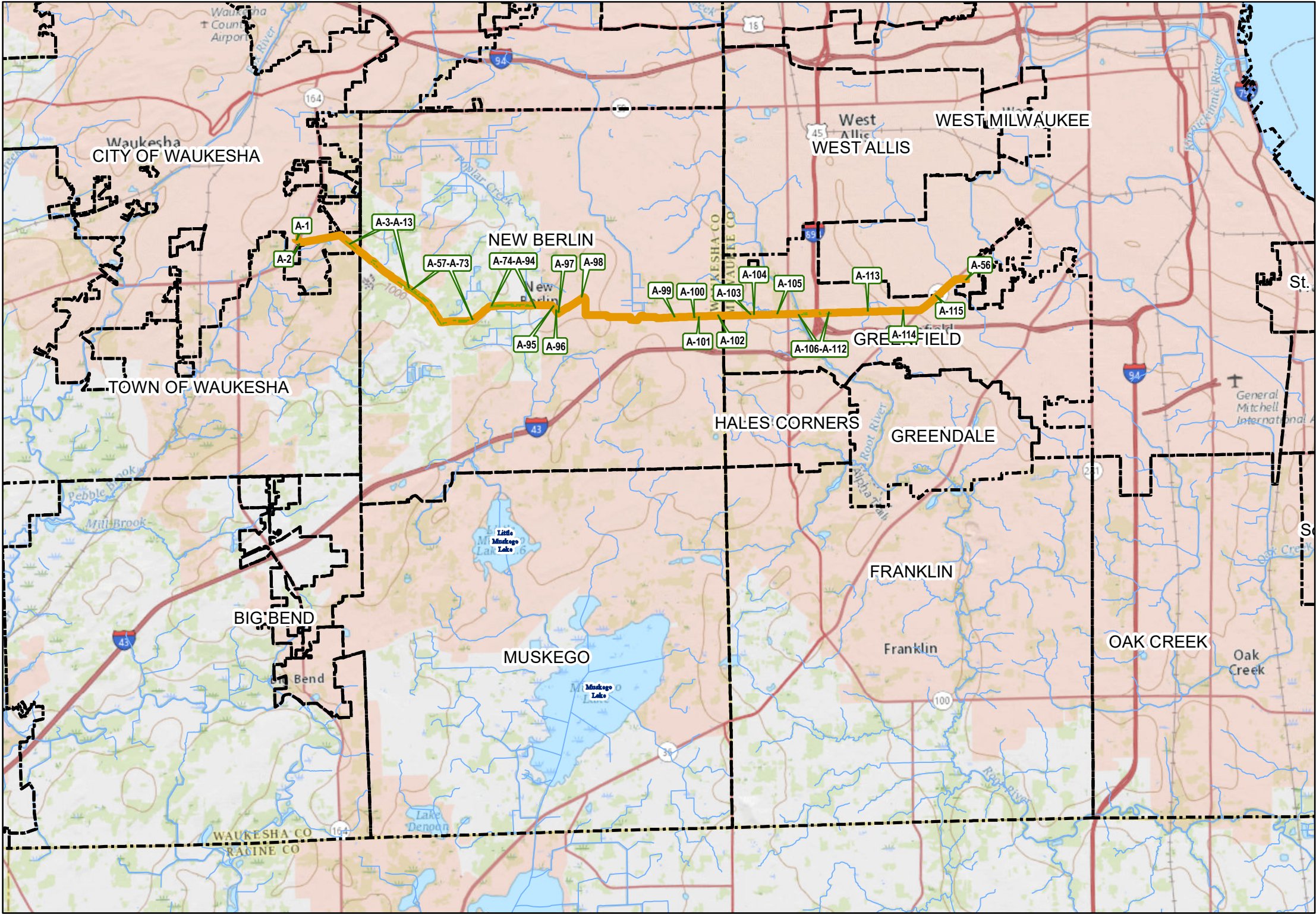


FIGURE NO. 3

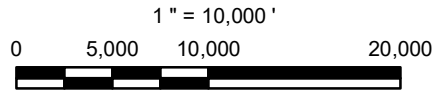


Legend

- M2 AGRICULTURE AREAS
- AGRICULTURE AREAS TAG NO.
- ROUTE ALTERNATIVE M2
- MUNICIPALITIES

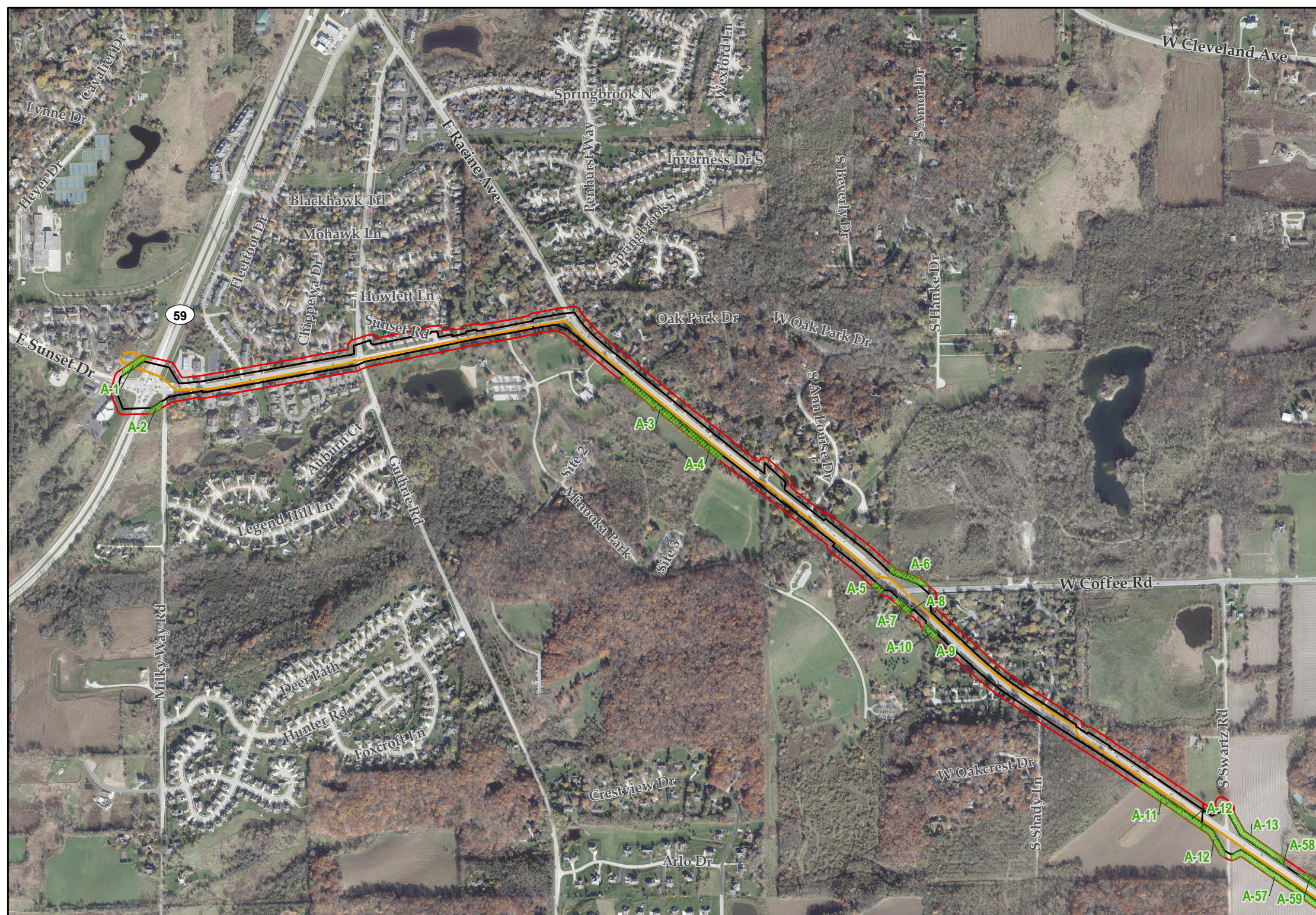
Notes

- BASEMAP IMAGERY FROM ESRI, USGS TOPO.
- AGRICULTURE AREAS FROM SEWRPC, LAND USE AREAS 2010.



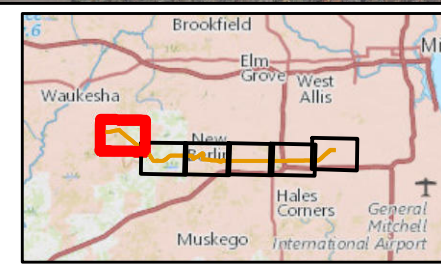
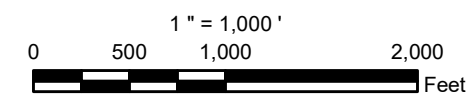
Plotted: 1/31/2018
Document Path: E:\WetlandsGeneral\WaukeshaPipeline2016_263344\263344-GHV2-OverviewAG_M2.mxd

FIGURE NO. 3A



- Legend**
- M2 AGRICULTURE AREAS
 - RIGHT-OF-WAY
 - 50' BUFFER
 - ROUTE ALTERNATIVE M2

- Notes**
- BASEMAP IMAGERY PROVIDED BY GREELEY & HANSEN, FALL 2017.
 - AGRICULTURE AREAS FROM SEWRPC, LAND USE 2010.



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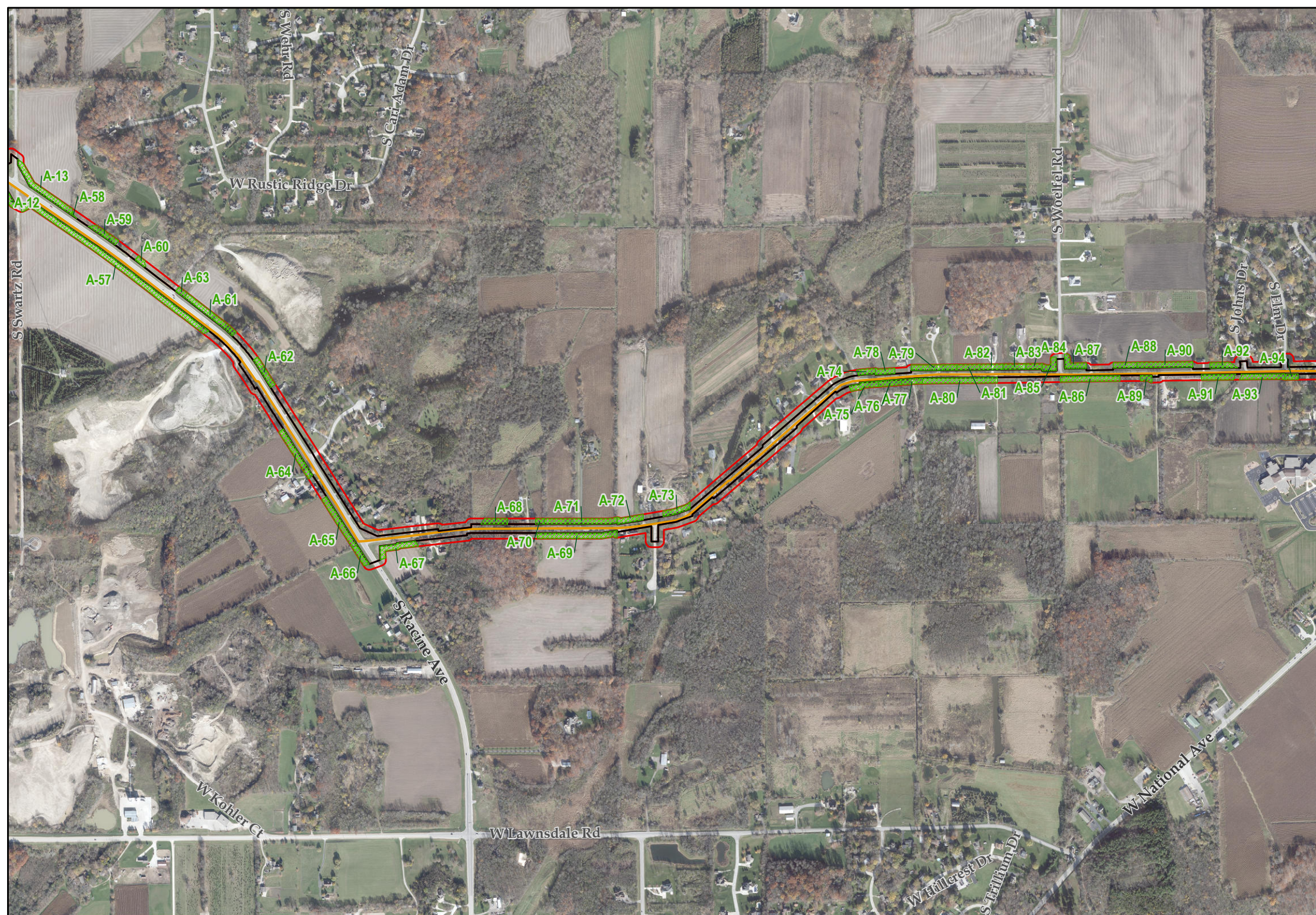
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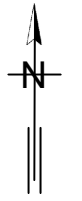
Waukesha, Wisconsin
Great Lakes Water Supply Program
ROUTE ALTERNATIVE M2
DESKTOP AGRICULTURE LAND INVESTIGATION
Date: 2/1/2018

Plotted: 2/1/2018
Document Path: E:\WetlandsGeneral\Waukesha\Pipeline\2016_263344\263344-GHV2-M2Agmb.mxd

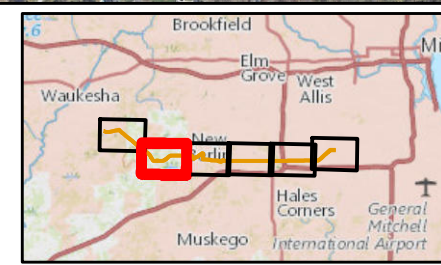
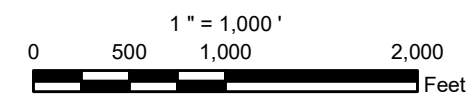
FIGURE NO. 3B



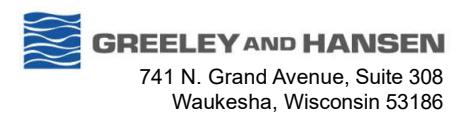
- Legend
- M2 AGRICULTURE AREAS
 - RIGHT-OF-WAY
 - 50' BUFFER
 - ROUTE ALTERNATIVE M2



- Notes
- BASEMAP IMAGERY PROVIDED BY GREELEY & HANSEN, FALL 2017.
 - AGRICULTURE AREAS FROM SEWRPC, LAND USE 2010.

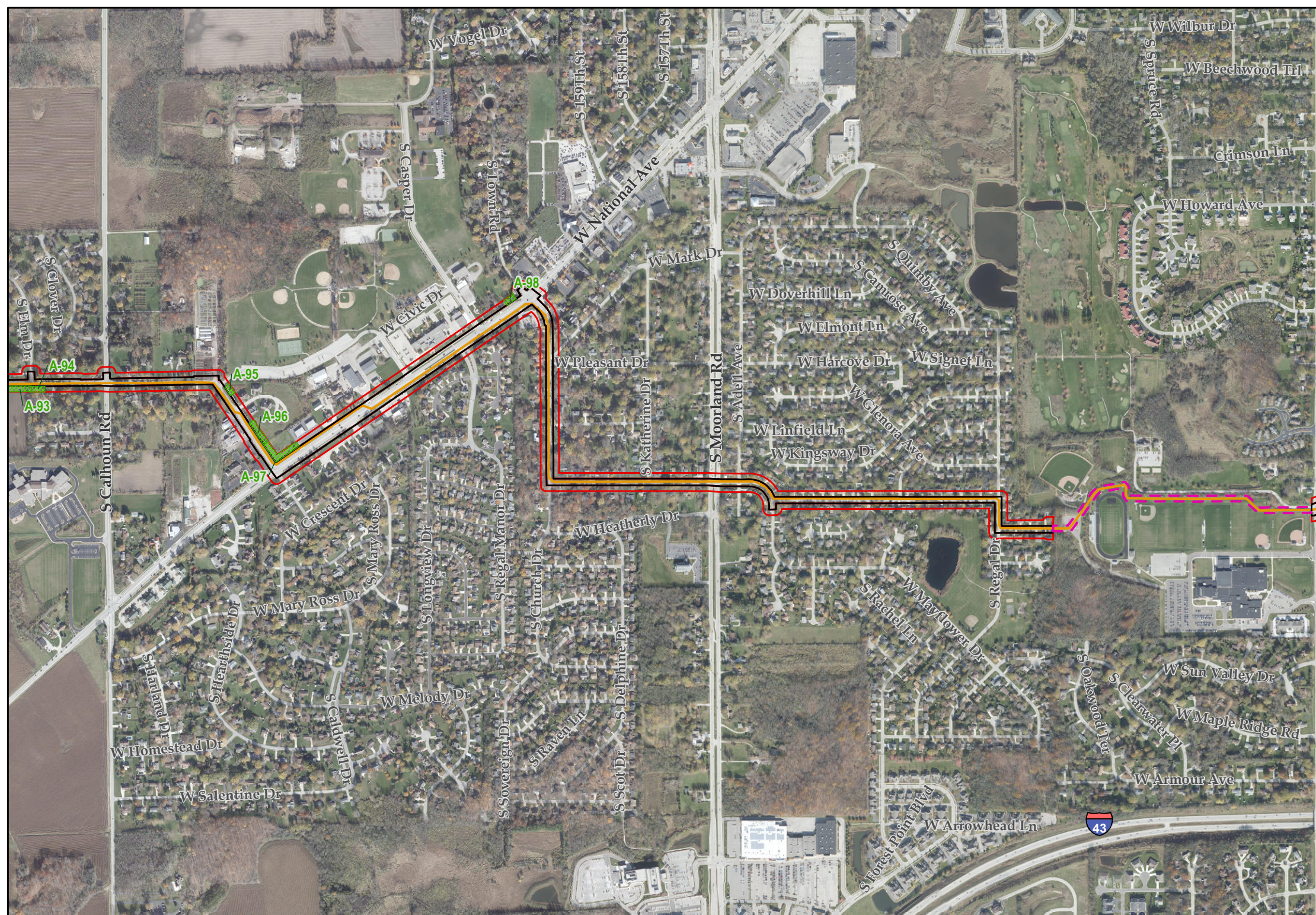


Plotted: 2/1/2018
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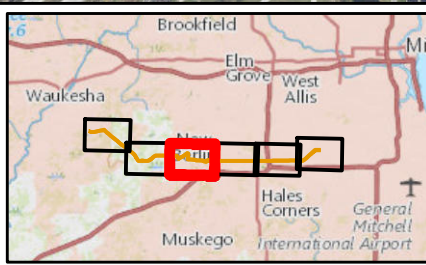
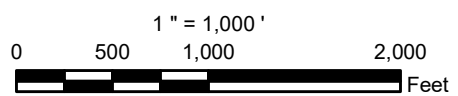
Waukesha, Wisconsin
Great Lakes Water Supply Program
ROUTE ALTERNATIVE M2
DESKTOP AGRICULTURE LAND INVESTIGATION
Date: 2/1/2018

FIGURE NO. 3C



- Legend**
- M2 AGRICULTURE AREAS
 - RIGHT-OF-WAY
 - EASEMENT
 - 50' BUFFER
 - ROUTE ALTERNATIVE M2

- Notes**
- BASEMAP IMAGERY PROVIDED BY GREELEY & HANSEN, FALL 2017.
 - AGRICULTURE AREAS FROM SEWRPC, LAND USE 2010.



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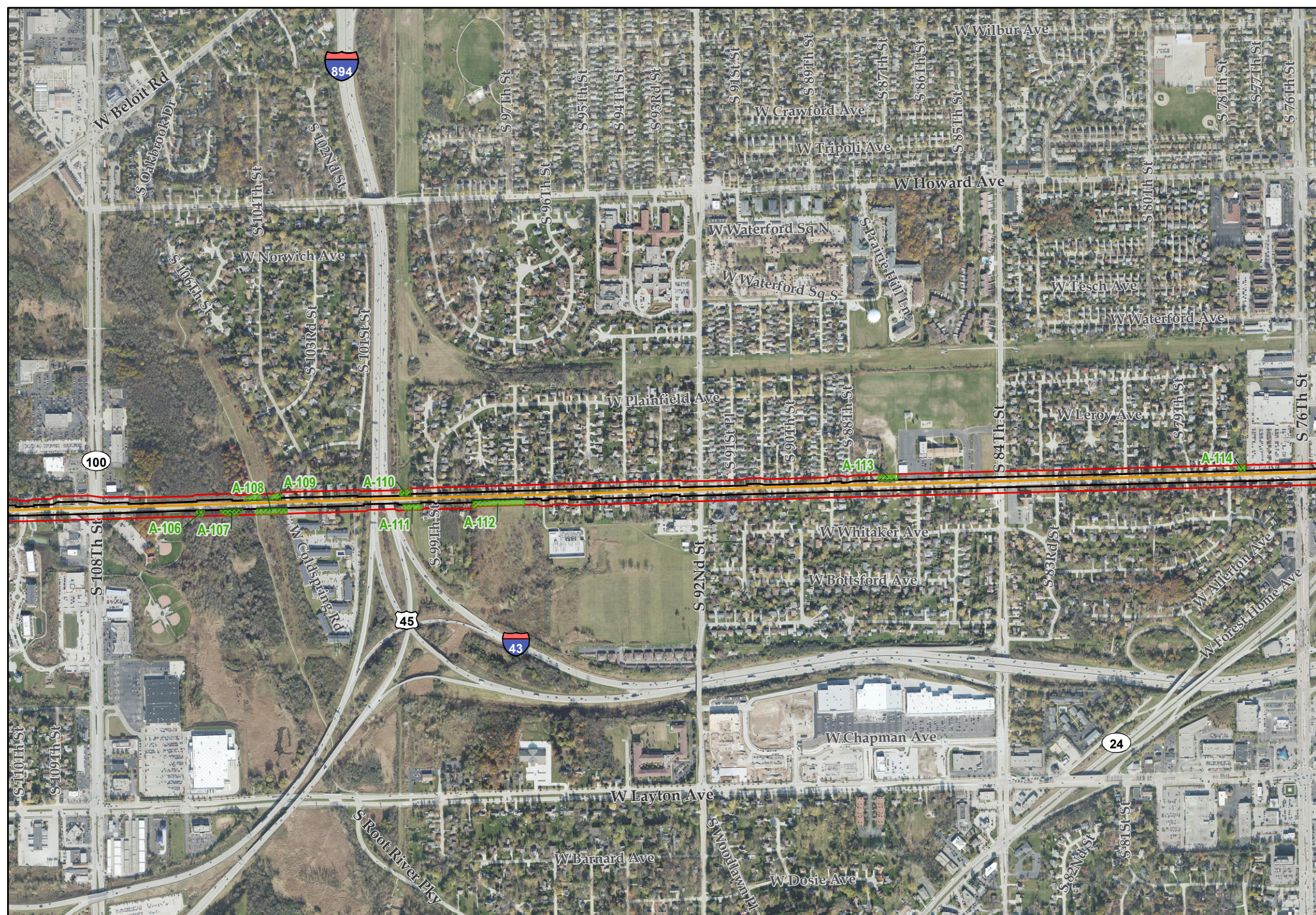
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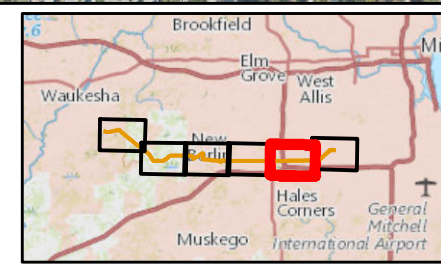
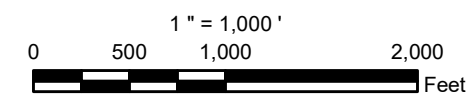
Waukesha, Wisconsin
Great Lakes Water Supply Program
ROUTE ALTERNATIVE M2
DESKTOP AGRICULTURE LAND INVESTIGATION
Date: 2/1/2018

FIGURE NO. 3E



- Legend**
- M2 AGRICULTURE AREAS
 - RIGHT-OF-WAY
 - 50' BUFFER
 - ROUTE ALTERNATIVE M2

- Notes**
- BASEMAP IMAGERY PROVIDED BY GREELEY & HANSEN, FALL 2017.
 - AGRICULTURE AREAS FROM SEWRPC, LAND USE 2010.




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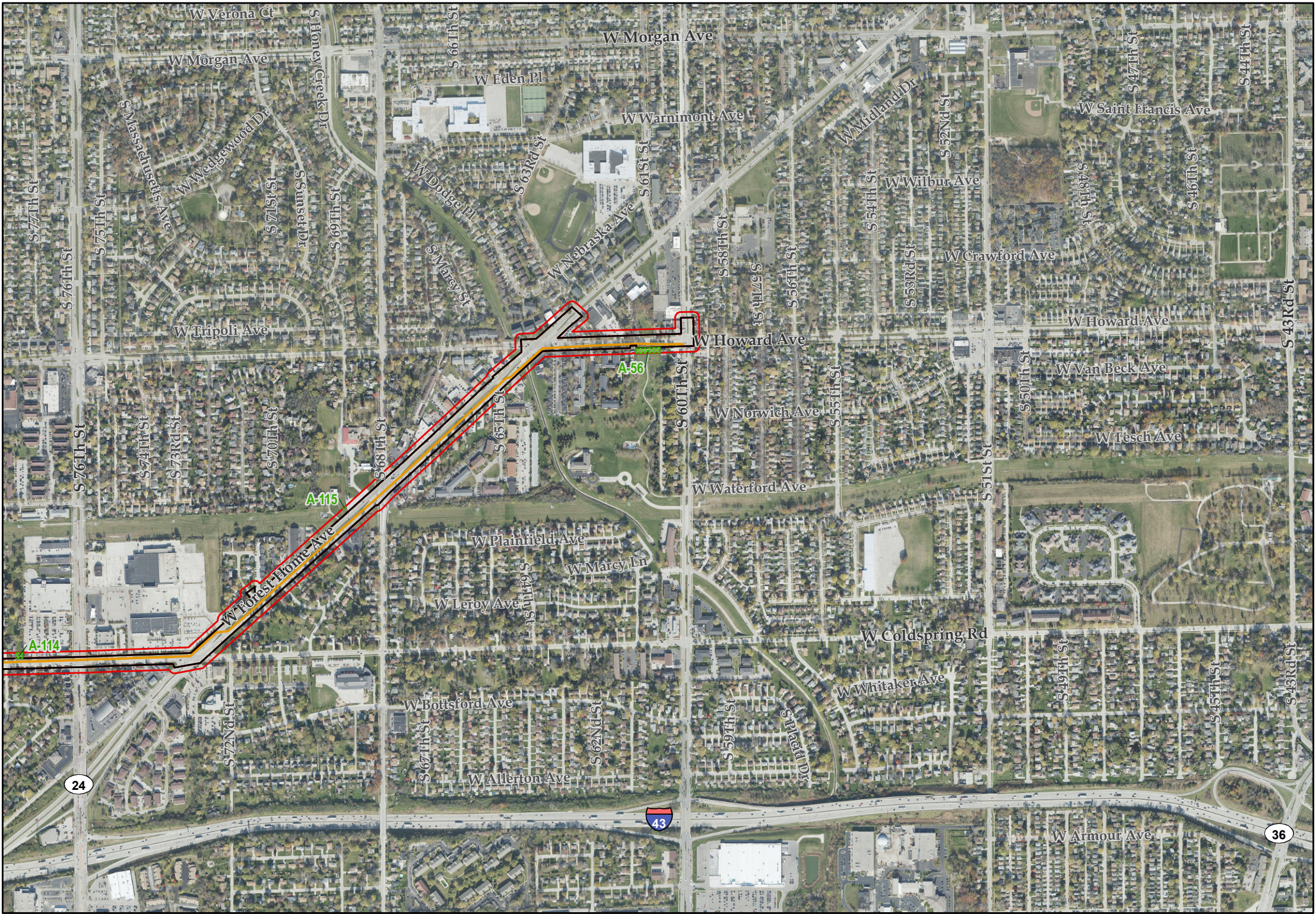
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Waukesha, Wisconsin 53186



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Great Lakes Water Supply Program
ROUTE ALTERNATIVE M2
DESKTOP AGRICULTURE LAND INVESTIGATION
Date: 2/1/2018

FIGURE NO. 3F



- Legend
- M2 AGRICULTURE AREAS
 - RIGHT-OF-WAY
 - 50' BUFFER
 - ROUTE ALTERNATIVE M2

- Notes
- BASEMAP IMAGERY PROVIDED BY GREELEY & HANSEN, FALL 2017.
 - AGRICULTURE AREAS FROM SEWRPC, LAND USE 2010.

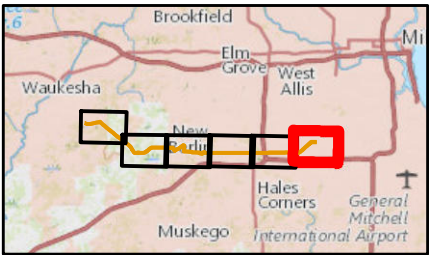
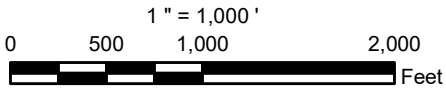
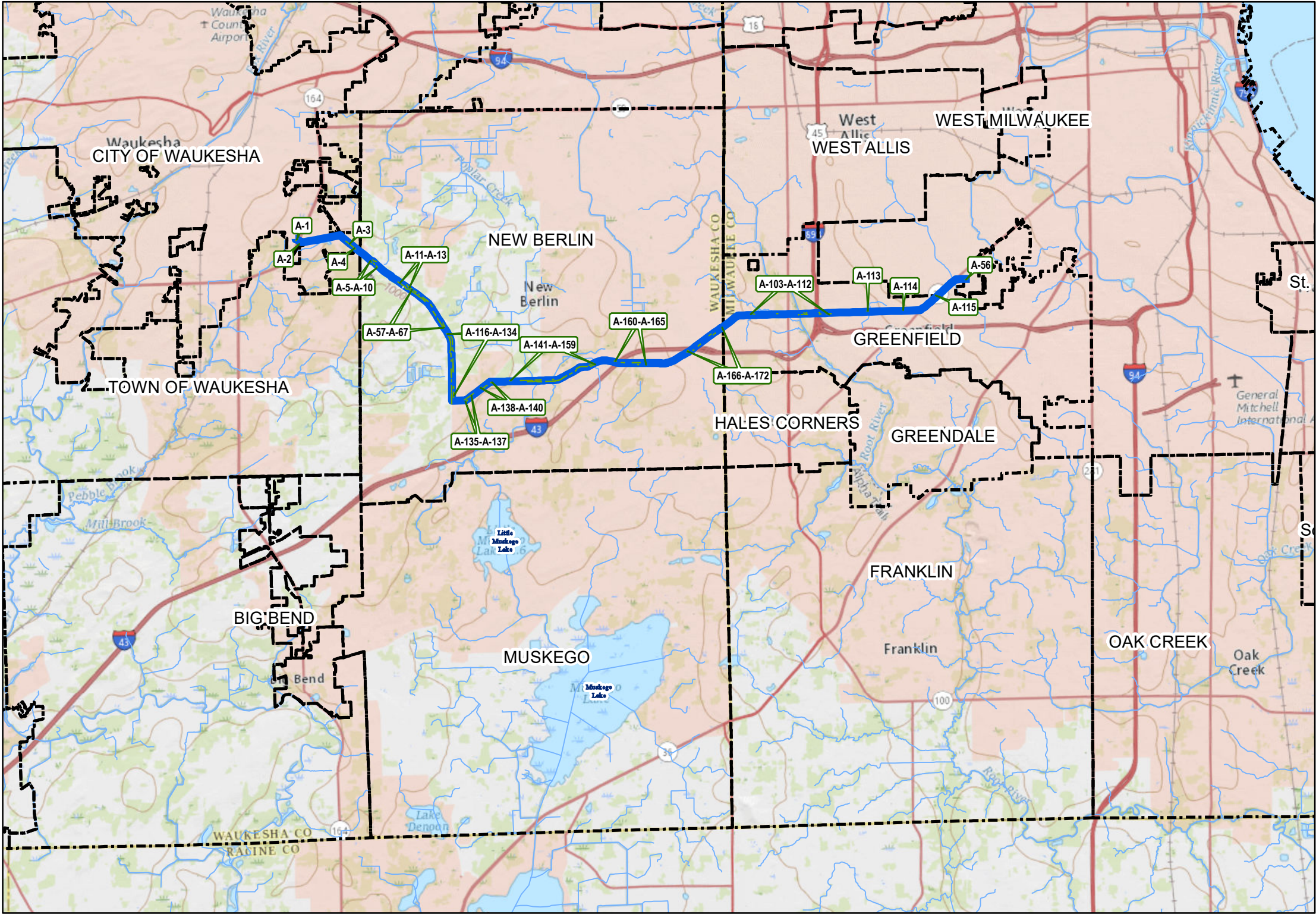
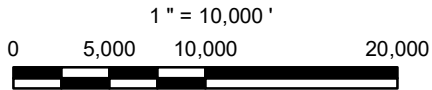


FIGURE NO. 4



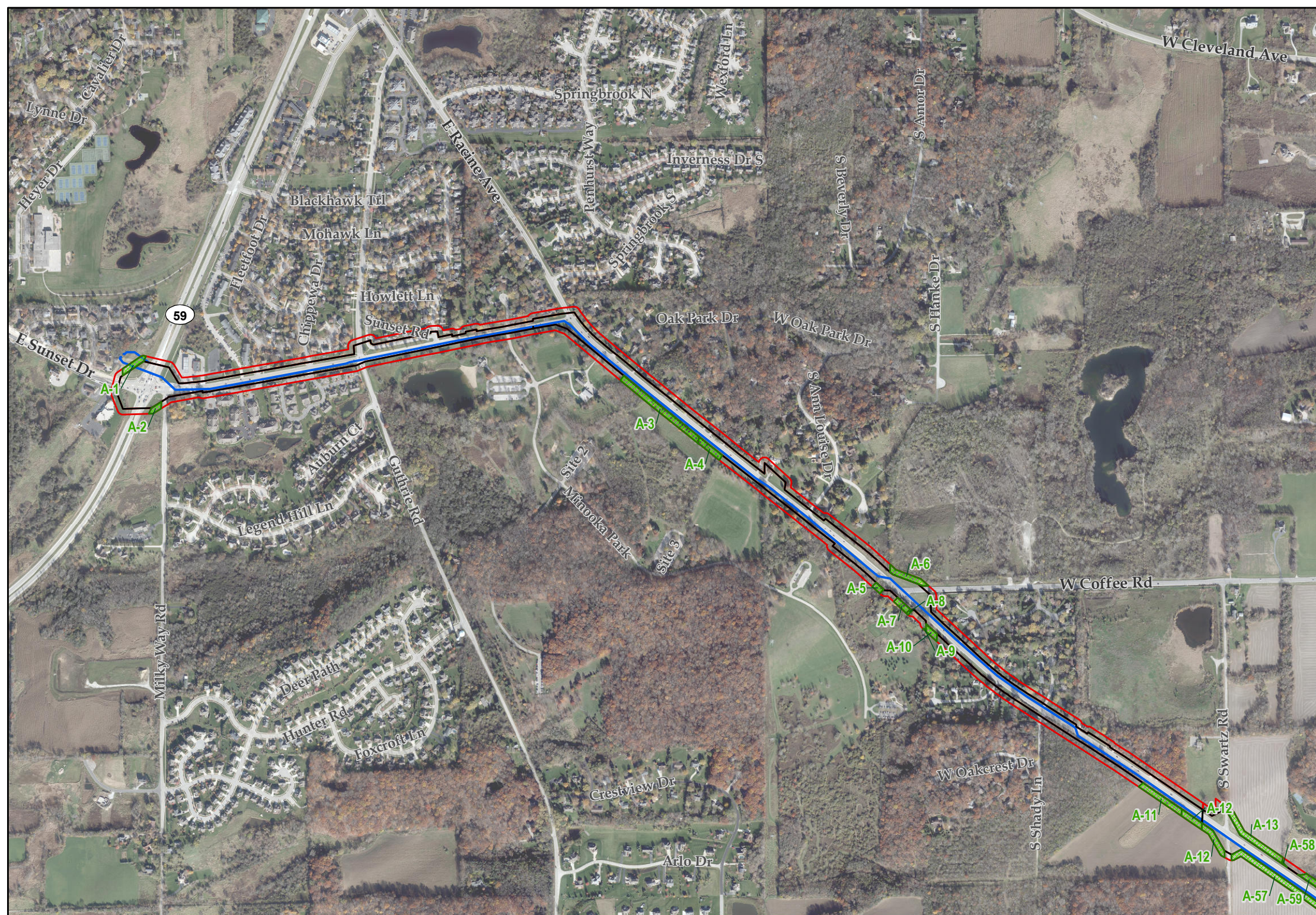
- Legend
- M3 AGRICULTURE AREAS
 - A## AGRICULTURE AREAS TAG NO.
 - ROUTE ALTERNATIVE M3
 - MUNICIPALITIES

- Notes
1. BASEMAP IMAGERY FROM ESRI, USGS TOPO.
 2. AGRICULTURE AREAS FROM SEWRPC, LAND USE AREAS 2010.



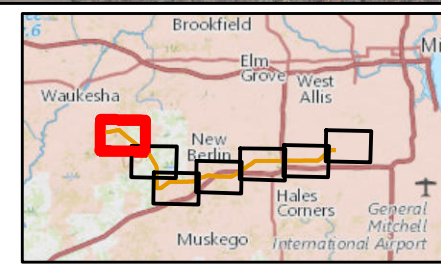
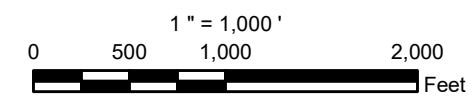
Plotted: 1/31/2018
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FIGURE NO. 4A



- Legend**
- M3 AGRICULTURE AREAS
 - RIGHT-OF-WAY
 - 50' BUFFER
 - ROUTE ALTERNATIVE M3

- Notes**
- BASEMAP IMAGERY PROVIDED BY GREELEY & HANSEN, FALL 2017.
 - AGRICULTURE AREAS FROM SEWRPC, LAND USE AREAS 2010.




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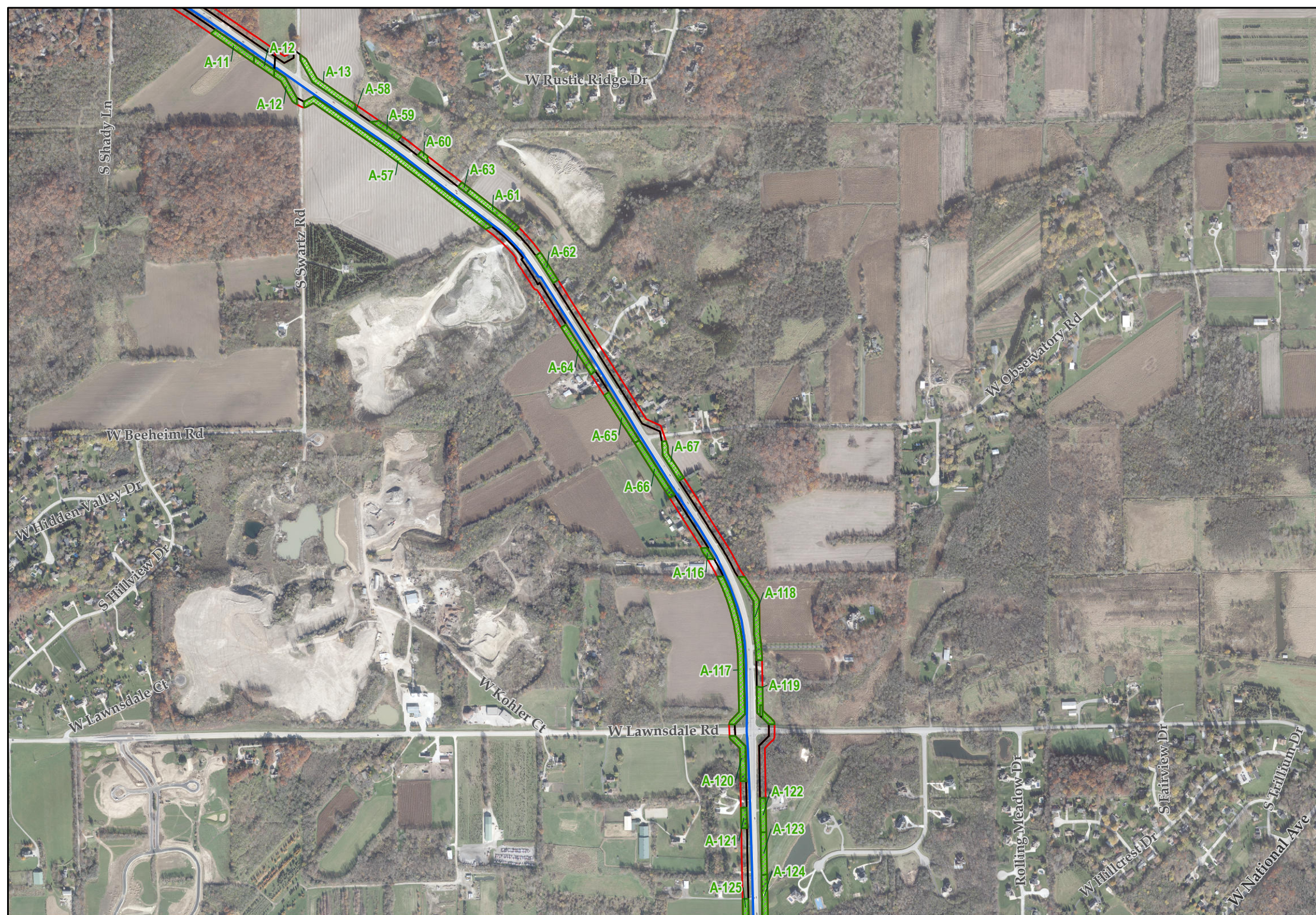
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Waukesha, Wisconsin 53186



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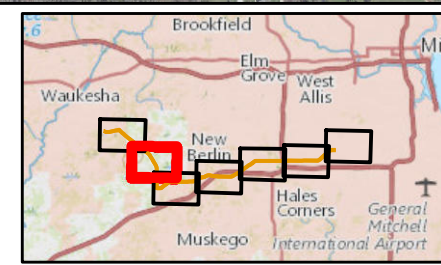
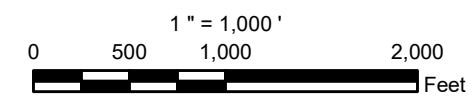
Waukesha, Wisconsin
Great Lakes Water Supply Program
ROUTE ALTERNATIVE M3
DESKTOP AGRICULTURE LAND INVESTIGATION
Date: 2/1/2018

FIGURE NO. 4B



- Legend
- M3 AGRICULTURE AREAS
 - RIGHT-OF-WAY
 - 50' BUFFER
 - ROUTE ALTERNATIVE M3

- Notes
- BASEMAP IMAGERY PROVIDED BY GREELEY & HANSEN, FALL 2017.
 - AGRICULTURE AREAS FROM SEWRPC, LAND USE AREAS 2010.




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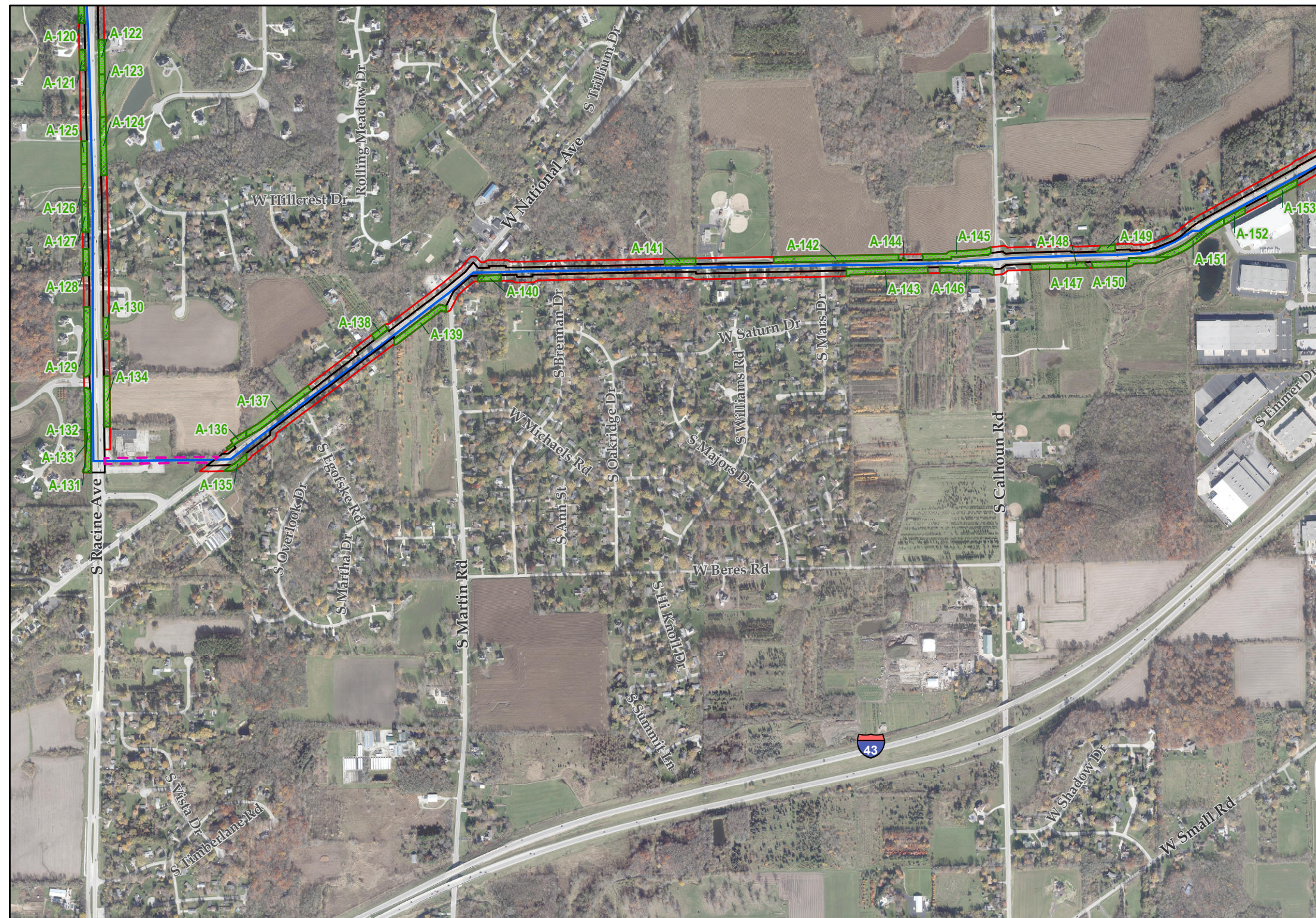
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Great Lakes Water Supply Program
ROUTE ALTERNATIVE M3
DESKTOP AGRICULTURE LAND INVESTIGATION
Date: 2/1/2018

FIGURE NO. 4C



- Legend
- M3 AGRICULTURE AREAS
 - RIGHT-OF-WAY
 - 50' BUFFER
 - EASEMENT
 - ROUTE ALTERNATIVE M3

- Notes
- BASEMAP IMAGERY PROVIDED BY GREELEY & HANSEN, FALL 2017.
 - AGRICULTURE AREAS FROM SEWRPC, LAND USE AREAS 2010.

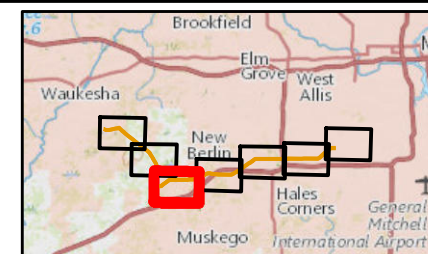
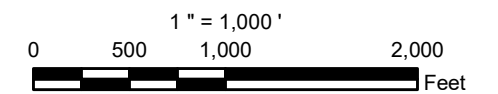
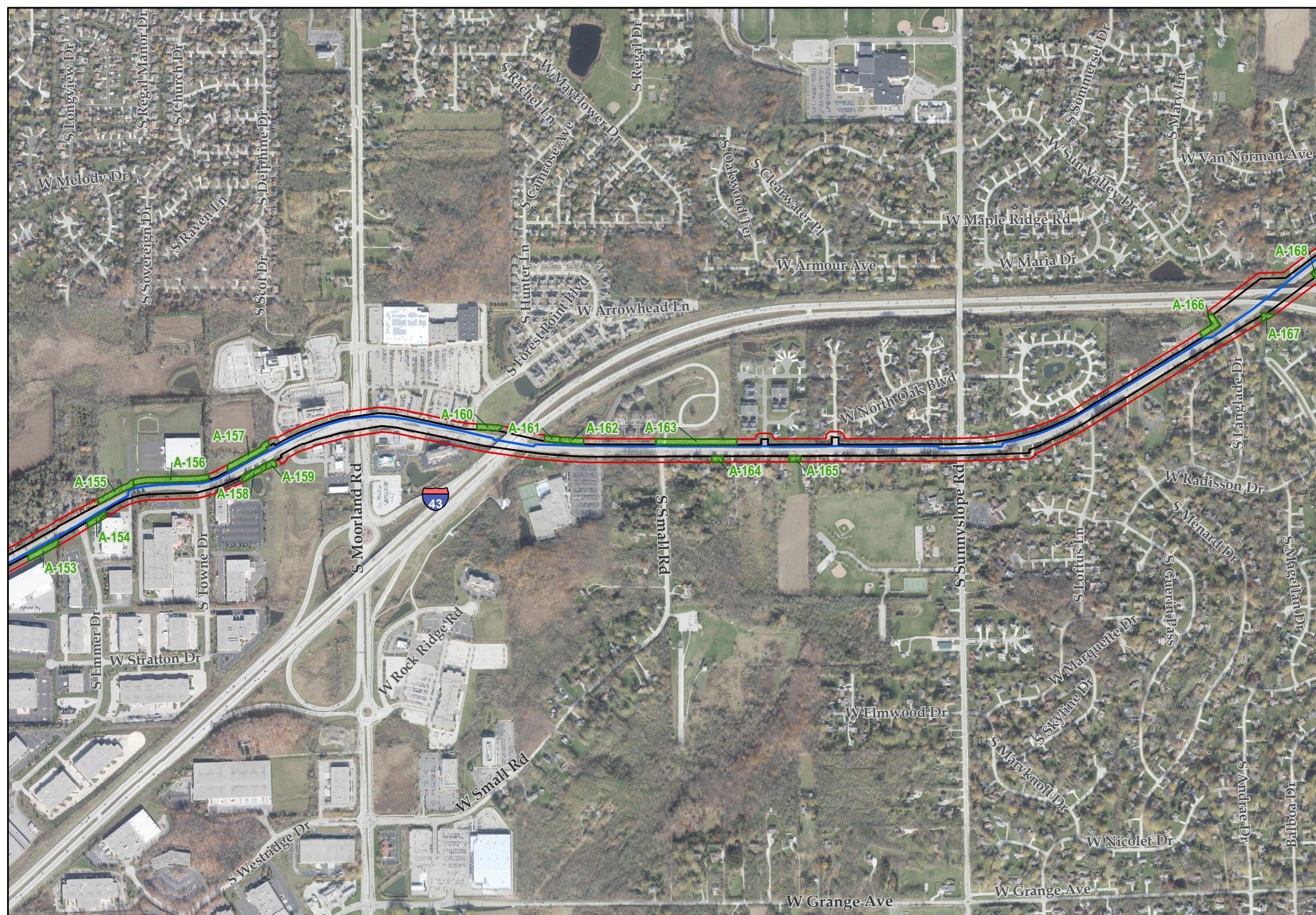
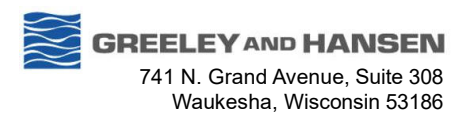
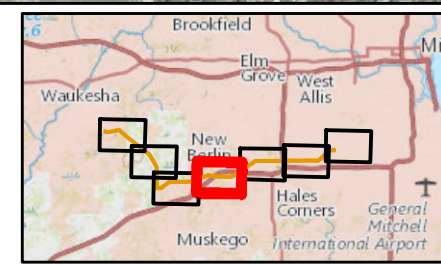
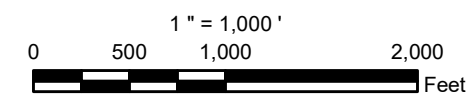


FIGURE NO. 4D



- Legend**
- M3 AGRICULTURE AREAS
 - RIGHT-OF-WAY
 - 50' BUFFER
 - ROUTE ALTERNATIVE M3

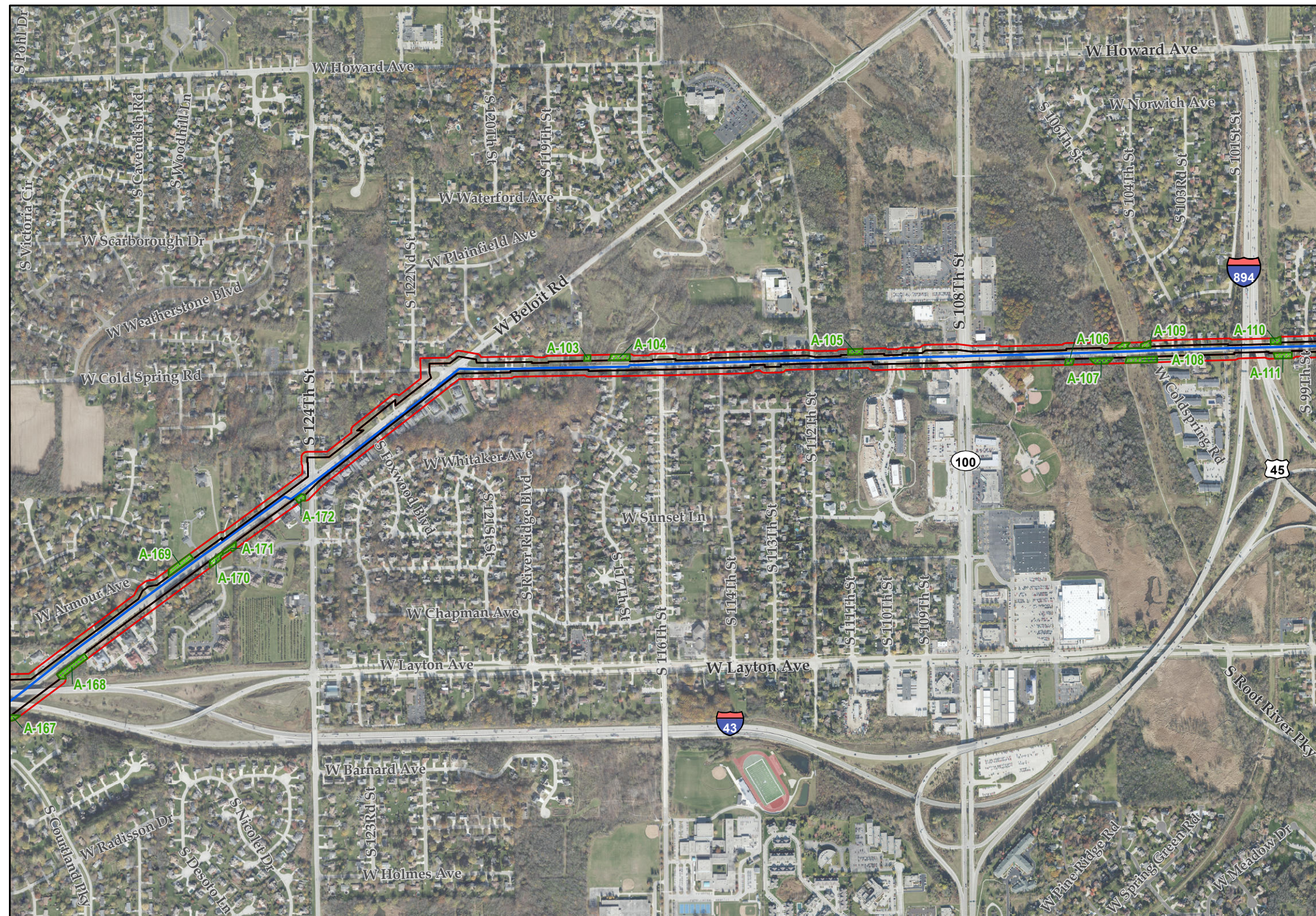
- Notes**
- BASEMAP IMAGERY PROVIDED BY GREELEY & HANSEN, FALL 2017.
 - AGRICULTURE AREAS FROM SEWRPC, LAND USE AREAS 2010.



Waukesha, Wisconsin
Great Lakes Water Supply Program
ROUTE ALTERNATIVE M3
DESKTOP AGRICULTURE LAND INVESTIGATION
Date: 2/1/2018

Plotted: 2/1/2018
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FIGURE NO. 4E



Legend

 M3 AGRICULTURE AREAS

☐ RIGHT-OF-WAY

 50' BUFFER

— ROUTE ALTERNATIVE M3

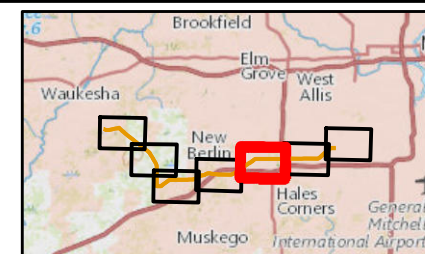
Notes

1. BASEMAP IMAGERY PROVIDED BY GREELEY & HANSEN, FALL 2017.
2. AGRICULTURE AREAS FROM SEWRPC, LAND USE AREAS 2010.

1" = 1,000'

0 500 1,000 2,000

Feet



Waukesha, Wisconsin
Great Lakes Water Supply Program
ROUTE ALTERNATIVE M3
CULTURE LAND INVESTIGATION
Date: 2/1/2018

FIGURE NO. 4F



- Legend
- M3 AGRICULTURE AREAS
 - RIGHT-OF-WAY
 - 50' BUFFER
 - ROUTE ALTERNATIVE M3

- Notes
- BASEMAP IMAGERY PROVIDED BY GREELEY & HANSEN, FALL 2017.
 - AGRICULTURE AREAS FROM SEWRPC, LAND USE AREAS 2010.

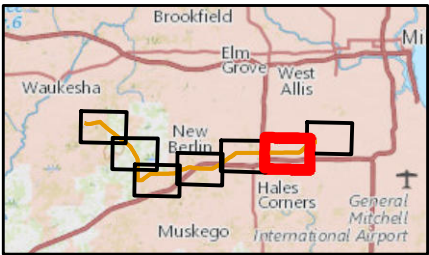
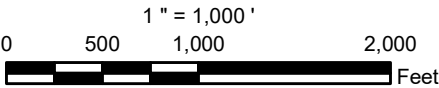
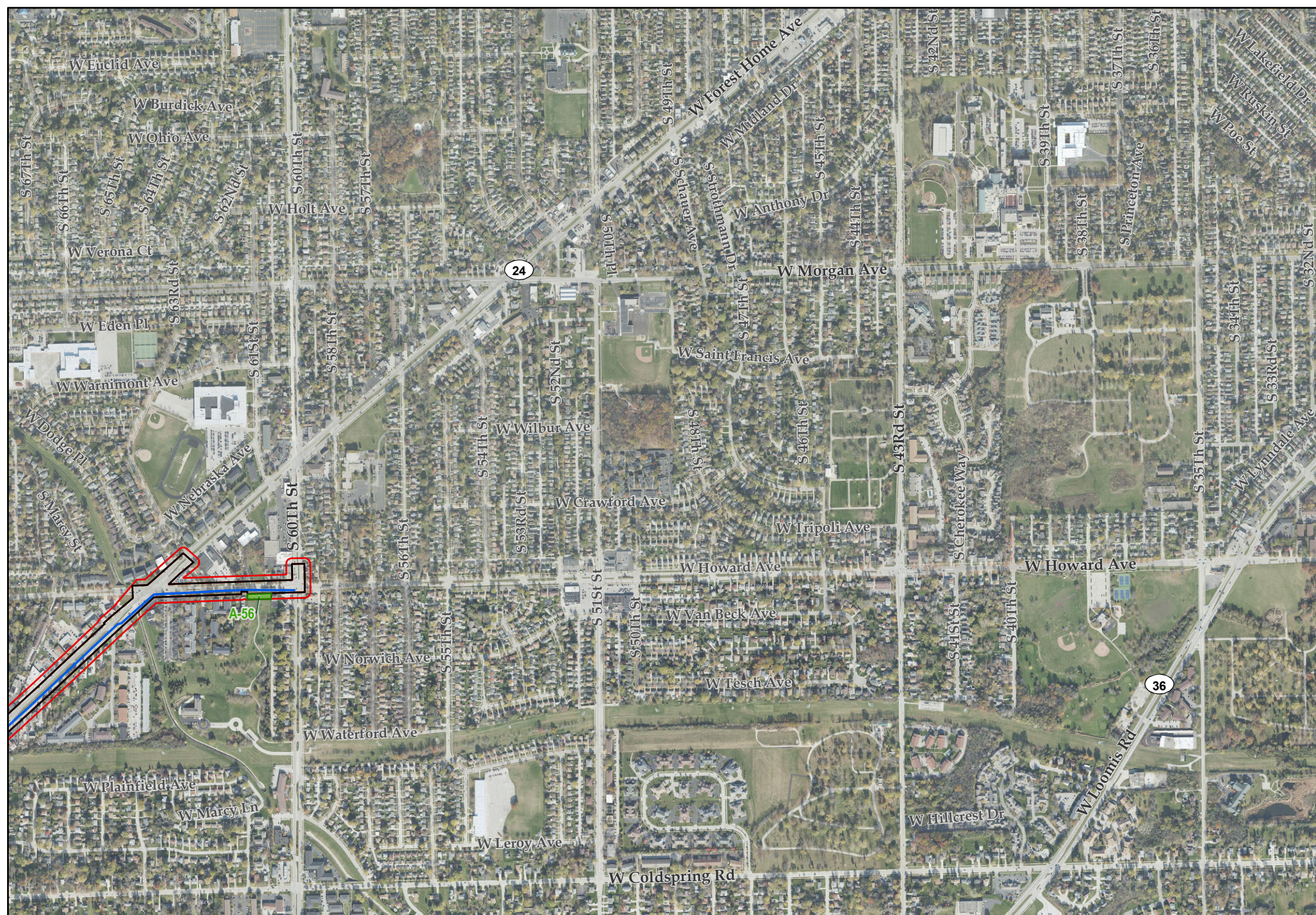
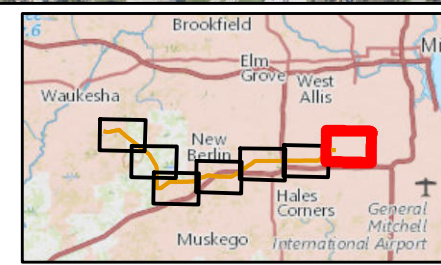
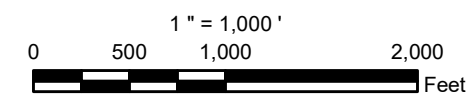


FIGURE NO. 4G

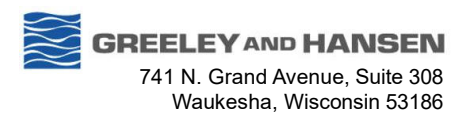


- Legend**
- M3 AGRICULTURE AREAS
 - RIGHT-OF-WAY
 - 50' BUFFER
 - ROUTE ALTERNATIVE M3

- Notes**
- BASEMAP IMAGERY PROVIDED BY GREELEY & HANSEN, FALL 2017.
 - AGRICULTURE AREAS FROM SEWRPC, LAND USE AREAS 2010.



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Waukesha, Wisconsin
Great Lakes Water Supply Program
ROUTE ALTERNATIVE M3
DESKTOP AGRICULTURE LAND INVESTIGATION
Date: 2/1/2018



GREELEY AND HANSEN

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